

Record

1375 -

[1379-80 in other book]

Mosquitoes pp. 1, 3-13,

1375

Mosquitoes on Florida trip, March 1905

- [1] Temporary rain pools in the pine barrens near rail road, Southern Georgia March 2.
Isolated 1, 2-3, 4, 5-8, 9, 10 (11 dead)
- [2] A similar pool with less larvae further along railroad. So. Ga. Mar 2.
- [3] In dirty recent dry pools along railroad Jacksonville Fla. March 2. Some puddles nearly dry, one largely pupae. Isolated 1, 2, 3, 4, 5-6, 7-8, 9-10, 11-14, 15, 16, 17, 18, 19-22
- [4] In pools in swampy land near Magnolia Springs, Fla. March 3 [ditched along track at Green Cove Spgs. full of fish & no wigglers] Isolated 1-2, 3, 4-6, 7-9, 10-12, 13-14, 15, 16-17 (1 skin lost), 18, 19, 20-21, 22
- [5] One wiggler in a swampy piece with cypress knees Jacksonville, 3 miles south, March 4. (died)
- [6] Railroad ditch, & temporary puddles 2-3 miles south of Jacksonville, March 4. Divided into A & B
A Anopheles. Isolated 1-3, 4, 5,
B Short tubed 1-5 (only 4 skins & 1 dead), 6, 7, 8, 9-12 (2 skins lost, two pupae dead),
C Long tubed 13-14, 15, 16, 17, 18, 19, 20
- [7] In dirty pools near tide water in mouth of creek Riverside, Jacksonville, end of car line Mar 4.
Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11-14 (1 skin lost), 15-17, 18-19 (1 skin lost), 20-24, 25 (1 dead, 1 pupa lost), 26, 27, 28, 29, 30-31, 32, 33, 34
- [8] Green Cove Springs, 2 m. south, temporary pool, priv. All Culex
Isolated 1-4, 3-5 (1 skin lost), 6-7, 8-10, 11, 12-13, 14, 15-16
- [9] In a hole dug in the coral rock, white muddy with the lime, Miami, Fla. Egg boats, all stages & pupae, pupae.
Isolated 1-3, 4-8 (11 dead), 9-10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21.
- [10] Large egg boats in a barrel of stinking milky water in orange grove near Miami River, March 7. Hatched same day.
Isolated 1-2
- [11] One larva in head of drainage ditch of old water main at edge of Everglades, Miami, March 7. Stage III. (killed by cyanide work)
- [12] Egg boats in crab hole full of salt water in edge of mangrove swamp, peninsula, Miami, near canal cut, March 8

1375
Larvae on trunks of Live Oak trees Jacksonville Fla
Mar 1 1905 (To Kearfoot)

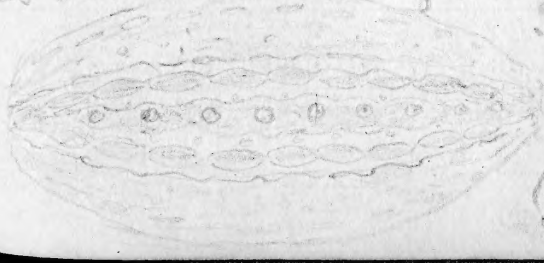
1376
Minute larvae under web full of red grass like
saw dust on back of leaves of *Piscidia*, Miami Fla.
March 6 1905 (To Kearfoot)

1377
Chambered case larvae on saw palmetto Jack-
sonville and Miami, March 13 (To Kearfoot)

1378
Larvae in flower stems of saw palmetto in
the chestnut joints, Miami Fla, Mar. 13, 1905
(To Kearfoot)

[1379-80 other book]

1381
New Code (or fascicle) Tryp. & C. Sept. 28 1905 on *Ceanothus*.
Elliptical, rather elongate, taper subquadrate but not
narrowed in the side like fascicle and prominent. Dorsum
rather convex in d. aspect, almost entirely narrowed to the
ends, side nearly flat, for upper 1/2 then slightly to the ridge
3/4 region retracted. Hd in hind, dark yellow green,
d. sp. (1)(2)(3)(4)(5) light yellow spots. Large, minute, annular.
A narrow yellow line in (1) darkened, interseg. very thin
a more diffuse yellow line along (2) dark obsolete at ends
a row of yellow dashes in (2). Spines visible. (1) line
separate at ends. Smooth sparsely round granula on
a smooth skin, no regular bumps over a (2) and
seta obsolete. Length 8 mm. The depressed spaces
and interseg. sharp, a even defined edge, the granula
running right across. They are of considerable depth
sp. (1) and (2) granules round well separated, uniform
total small arising from among the uniform gran-
ules on both sides. Left



def. sp. (3) in back curve
Olive seg - (4) a small yellow spot
above & beneath on below (3)
(5) large seg. (6) small interseg. gaps
spots in line. (2) dashes, separate

[13] Larvae in rain water barrels, Day View Hotel, Miami
March 9. Isolated 1, 2, 3.

[14] Egg hatches and larvae in a rain water tank and
scrapage from a pipe of a reservoir, Key West, Fla March 10
Isolated 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

[15] More stage I from the *Deinocerites* hole ([12]) Miami
peninsula March 12.

[16] Pupae & larvae in a dog spring hole, sulphur
water, center of peninsula Miami March 12.
Isolated 1, 2, 3, 4, 5.

[17] Anopheles in a spring hole and deep hole both
dry in coral rock near an old quarry above Coconut
Scrie Fla. March 13. Died April 18.

[18] In an old barrel partly set in the ground under the
roof of the old quarry engine house, Coconut Scrie
March 13. Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

[19] Palm Beach Fla Mar. 14. *Culex* in rain water holes at
edge of swamp, cut off. A short tube, 1, X B short tube 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

[20] Palm Beach Fla Mar. 14. Anopheles in similar hole
with (9) but more open and shallow. (Died all).

[21] Daytona, Fla., puddle beside rail road full of new
rain March 15. Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

[22] Old water barrel by disused pump back of Mildred Cottage
Ormond Fla. March 16. (fasciate & pipiens) Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

[23] Permanent or semipermanent rain field swamp holes near
the golf & golf grounds Ormond Fla. Mar. 16. Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

[24] Ditch by railroad full of new rain like 23 but with
Parosiphia, Ormond Fla March 16. Isolated 5 *Parosiphia* = F.
Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

[25] Sanford, Fla. March 17 in ditch & rain pools. mostly *Parosiphia*
jamaicensis with a few *Parosiphia* = P.

[26] Sanford, Fla. March 17 in a more swampy place with large
small water plants but joined to r.r. ditch and with also
jamaicensis and *Parosiphia*. Separated
A. black tube
B. m. black tube
C. yellow tube (died)

locally above spiracles, between (5) & (6). i.e. seg. post.

27) Tampa Fla, March 18, in nearly dry pools of black muck
at end of a permanent hammock pool in pine barren
near tin bay. Pool had water lilies, arrow leaves, distinct
edges, no water trees. Larvae crowded in bunch pools
with *Protophora* (27 P), also *minicora* (27 M) 1.
Isolated 1. (skin box) ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~

[38] New Smyrna, March 21 1905 in water in hollow oak
trees. Sol 1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19.

- C80. Nigger slough, Gardena Cal. May 30 1906. Permanent water with reeds and scum. 1-2, 3, 4, 5 Anoph. Got more on June 6 1906 in the reeds. 6 June, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17. Old lot in open 18, 19 Anoph. 20-21 An., 22 An., 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33.
- C81. San Diego Cal. June 2 1906. Road puddle fed by leak in pipe. with algae running. More June 19. 1, 2, 3, 4, 5, 6.

catch of eggs was incised.

- C82. San Diego Cal. June 2 1906. Old water rat area wharf. ~~XXXXXX~~ 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34.
- C83. Dia Juana Mexico. June 2 1906. Pools in river bed algae etc. 1, 2, 3-4, 5-6, 7-8, 9, 10, 11, 12.

- C84. Arceutwater Junction Cal. June 2 1906. Pools in stream bed. 1-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. More June 19. 15, 16.

- C85. Arceutwater Junction, Cal. June 2 1906. Reedy swamp. 1 Anoph. 2 Anoph. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20-23, 24-26, 27-28.

- C86. National City Cal. June 2 1906. Salt water hole in marsh covered by fleshy weeds. 1, 2, 3, 4, 5, 6. More June 19. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32-37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57. Sp. =

- C87. National City Cal. June 2 1906. Rain barrel. mostly pupae. 6 skins saved. 1.

- C88. Old Town, Cal. June 3 1906. Horse trough.

- C89. Water barrel Indio Cal. Taken by Mr. Candell June 9 1906. X, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

- C90. Drain at Indio, Cal. Mr. Candell.

- C91. Coachella Cal. in pond. Mr. Candell. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19-20, 21, 22, 23-24, 25, 26, 27, 28.

- C92. Yaguna, Cal. in a well hole by edge of lake, June 14 1906. 1, 2, 3, 4. Closed by weeds and dark.

- C93. Yaguna, Cal. in a well hole by edge of lake, full of carcasses, June 14, 1906. Top open, algae. X, X, X, X 5, 6, 7.

- C94. Yaguna, Cal. in eel grass in the edge of the deep lake. very few larvae. 1, 2.

- C95. In a rain water barrel Santa Catalina Is., Avalon, June 14 1906. Mr. Candell. X, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.

- C96. In water in the cellar 1210 Westlake Ave. Los Angeles Cal. 1, 2, 3, 4, 5, 6, 7-8, 9, 10-11, 12.

- C97. In a strongly brackish large puddle, solidly full of fine eel grass between beach and railroad, Redondo, Cal. June 25 1906.

- C98. Big reedy fresh swamp, San Anofe, Cal. at mouth of river by the sea. Full of red backs adults. water deep. Fish 1, 2.

- C99. Cattle-track puddles at outlet of 98 swamp, San Anofe, Cal. water running in little stream stamped up in the mud. 1, 2.

- C100. A large pool of clean water behind a clay dam in Anoyo under rail road bridge at Ostrich Farm June 30 1906. Contains mostly spot-tarsalis, incidens, teritans, var-tarsalis?, and a few Anopheles. 1-3 (5) 4, 5, 6, 7, 8, 9, teritans; 10 spot-tarsalis; 11.

- C101. In old tin can at San Luis Obispo. Cal. June 27 1906 (Mr. Candell) X, 2, 3, 4, 5, 6, 7, 8.

- C102. In pool in a rocky cañon on side of big hill near San Luis Obispo, Cal. June 27 1906. (100) (93) (67) (17) (4) H. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29.

- C103. Rain water barrel at San Luis Obispo (Mr. Candell) June 27 1906.

- C104. Slows covered with reeds, Guadalupe, Cal. June 27 (Mr. Candell). (1) (2) (5) (7) (8).

- C105. In puddle in bed of river Guadalupe. Cal. June 27. (1)

- C106. In water in a cellar San Francisco, Cal. June 29 1906. (1) (3) (4) (12) (13) (15).

- C107. Puddle by railroad, Eureka, Cal. July 2 1906 (Mr. Candell) (1) (10) (2) (3) (4) (5) (7) (8) (9) (11) (12) (13) (14) (24).

C108. Vents of water on an island opposite Eureka Cal. (McCardell) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.

C109 Barrel of rain water on an old wharf. Eureka Cal July 5 (McCardell) 1, 3, 4.

C110. Rain barrel in Eureka. 2

C111 In a drain in Eureka (McCardell) 3

C112 In a reclaimed salt-water swamp. (McCardell) Eureka, Cal. 1, 2, 3, 4, 5, 6, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

C113. Salt swamp at Eureka Cal, July 5 1906 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22.

C114. Slightly blackish water by railroad Eureka Cal (McCardell) 2, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

C115. Horse trough, Chico, Cal, July 11, 1906 (McCardell) 1, 4.

C116 Barrel in a stream, Plant Introduction garden, Chico Cal July 13 1906. 1, 2.

C117 Edges of streams etc, Chico, Cal, July 13, 1906 X 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

C118, Dunsmuir, Calif. in shallow pool of cool water by the R.R. July 15-06. insidens

Isolated 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-

C119. From a slowly moving ditch of cool seep water by R.R. at Dunsmuir July 17-06. Tarsalis insidens. Isolated 1-2-3-4-5-6-7-8-9-10-11-12-13.

C120. From the middle of a quite rapidly flowing stream of cool water by the R.R. at Dunsmuir on July 17. Some muds had lodged in the middle of the stream, which was a couple of feet wide and fed from springs. I have not found shute in as rapidly flowing water before. Isolated 1-2 which is all the larvae.

C121. In a small pool of stagnant, stinking pool by R.R. at Shasta Springs. July 18. I got too much seen in bottles & all died. Or maybe it was some mineral.

C122. In cold water in a little pocket in a hill near Shasta Springs. July 18. All insidens & thrown out. Were all small.

C123. Tarsalis insidens. In warm pool by R.R. in cow tracks near Dunsmuir, July 18. Isolated 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19.

C124 In salt pools in thick-leaved plants below
sand dunes, Carpinteria, Cal., July 20 1906.
X2, 3, 4, 5, X7, X9, 10, 11, 12, X14, X16.

C125. In slow half mile from B.H. near Shasta
Retreat, July 21. All Tarsalis. none isolated.

C126 Sisson, Cal., 3500 ft, July 23 1906 in springy
grassy meadow. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, White Dixa

C127 Sisson, Cal. July 23 1906. In edge of cold
stream covered with grass. 1, 2, 3, 4-5,

C128. Sisson Cal, in roadside puddles.

C129. Thall, Cal., July 25 1906, in puddles in alfalfa
field and caught. 1, 2, 3. Caught more every July 28.

C130. In rain barrel, eating station above Pokegama Cr
July 26 1906

C131 Klamath Falls, Or., in swamps pools etc
and caught. July 27 1906,

C132 Klamath Falls, Or., in hole in rock dry
at Lord. works, July 27 1906

C133 Tacoma Wash., Aug 1 1906. In pools in salt wash
and caught in grass nearby. Isolated 20.

C134 McRae, Wash., in a pool cut off from a stream
at Paradise Valley Aug. 3 1906. 1, 2, 3, 4, 5, 6, 7, 8.

C135 Ashford, Wash. in a muddy pool. Incidents common
in barrels. Isolated 1.

C136 Wellington BC in Dr Taylor's rain barrel and in a
stream full of water weeds. 1, 2, 3, 4.

C137 In a puddle near the lake edge, Lake Louise, Yagga
Alberta, Aug. 18/1906. 1, 2, 3, 4.

C138. Rain barrel at depot, Calgary, Alberta, Canada
Aug. 22 1906, 1, 2, 3, 4, 5

C139 Rain barrels in ground at railroad Medicine Hat, Alta
Aug 23 1906. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.

C140 Puddle cut off edge of shallow lake, North Portal, Sask,
Aug 26 1906. 1, 2, 3, 4

M [for Mosquitoes in BB] 141 Anopheles and Uano-
taenia in dug pools with cat-tails, Arlington
Va., August 12, 1917

M 142 Anopheles and Culex in swamp under grass and
bushes, Arlington, Va., Aug. 26, 1917

M 143 Egg hatching deposited at night in the screened
house in the 141 water, August 1917

1382

Red Aggyia, Burke, Sumnerland Cal, Dpt
 Agr no. 4430. Eggs to Fall 1906. In mass on cream
 colored with white furth and dark gray hair from
 moth. Eggs subspherical white smooth.
 One hatched May 15 1907. Hd rounded black w. $5 \pm$ Body
 subcylindrical, somewhat quadrate, square ended. Large sd with
 on joint 2 prominent, gray trace of lighter color hood sd on
 5-12. Vents large black ii iii iv vi. Hair long abundant
 black d. pale s-v. Feet long with long shaded black
 at apices. More hatched May 17

Ixviii

Aug 17 1907

1383 = 911.

Egg of *Catantodes confusaria* June 19 1907. Sub-
 cylindrical, the micropyle at end truncate the
 flat area nearly as large as the central diameter.
 Other end rounded, the 2 diameters nearly equal.
 About 20 longitudinal ribs even sharp white crested
 stopping at the edge of the truncation, slightly beaded
 even, striae fine obscure. Micropyle dark, coarsely
 reticulated at the edge over centrally. Black part
 turning to dull red the ribs & sets. White. $9 \times 6 \times 5$
 Hatched July 1. Hd rounded black = slightly shiny epistoma
 white. Body moderate, rather stocky thin feet normal.
 Dark brown brown banded with grayish white, a narrow
 band a thorax between the feet a little irregular edged
 & abd bands same as broad as the intervening spaces, and
 on 5-9 cut by a narrow thread-like sd line which
 widens at its joint junctions with the dark areas
 bands narrowed ventrally. A trace of dark d. line
 cutting the white bands and, a hyp. and divided
 of a broad adv. a narrow medio-v. lines, 10-13 with a
 narrow sd and broad blotchy s-v white bright, line
 feet dark inconspicuous. At development, refused trees -
 July 11 in II? Hd .7 quadrate rounded slightly bilobed wide
 than high brown black, epistoma and. & 2 ventral mottled
 brown the lobes white. Body moderate feet normal well
 joint, segs annulate. Dark brown brown a dorsal
 white mark on 5-9, a large mottled lat blotch joint
 cut by s-v fold. Slight white smothering sd, lat a tubal
 on 2-5 10-13. ventral dotted on tubercles. Vents feet black
 and feet large dark with a white outer line.
 Setae inconspicuous, no bumps on elevations.
 A median white band cut by a longitudinal line and
 the annulet incisions.
 Shed July 16 Hd .1. Same Hd rounded quadrate wide brown
 black lat broad mottled erect white band on face of each
 lobe, divergent below, a white triangle in Δ epistoma a trace
 of and. white. Body robust, weakly annulate, d. & other
 white patches as before, more mottled and cut by ground
 color which is darker, brown blackish. T in lat patches
 lumpy white.
 Shed July 21 Hd 1.4 Same markings, more doctol
 Hd on black epistoma white, white diffused dots

Calceolaria confusaria Hübn.
Described separately as ♀; 1843.
Museum of XIII L. 18, but as appears
from the host 'this' is the larva
of *glaudiva* Gu., which is ~~perhaps~~
justly a distinct species. Anyway
the larva does not agree with

that of comparative. The source
(Ent. Mus. III 47 1887) sometimes
possible for record of attendance.)

that the names were brought
from above but given no
description. The present is
the first account of the same

IXVIII. ~~IXVIII~~

H. 23

Stage I from the Ch. condition (p. 10) July 21. 1907.
 Not much with light brown, slightly bilobed
 shiny granular surface. Black mouth brown
 tipped. Body yellowish brown. Head with
 feet 9-8 a dark brown & was very shining
 brownish greenish, 1.25, by 1.25, 1.25, 1.25
 and large round blackish shiny black. 1.1 1.12
 1.25 rather coarse moderate black granular
 Egg. Head brownish greenish, body green shiny.
 All very fine, obscure numerous all defined
 lines radiating from the center. Cross lines
 imperceptible. D. 1.6. Yolk is a patch
 covered & a thin layer of whitish wool.

1386

Just hatched
 Trigon 31.2.

Aug 8	1.0	just cat
" 9	1.6	cat
" 10	1.8	cat
" 11	1.5	cat
" 12	2.1	"
" 13	2.4	"
" 14	2.4	5-6
" 15	2.4	"
" 16	2.8	cat
" 17	3.3	"
" 18	3.7	"

later to shed

Sept 1	12.0	to shed
" 3	12	by hide
" 4	12	cat
" 5	13	"
" 7	15.5	"
" 8	16	"
" 9	16	"
" 10	16.5	cat
" 11	16.5	cat
" 12	16.5	cat

July 21 1907. Shell slightly elliptical, dark red
 quite of head, flat even, shell smooth
 tubular, evident transverse & shining no
 normal. 1.1 x 1.0. 1.1 x 1.0. 1.1 x 1.0. 1.1 x 1.0.
 middle for fine lines.

Stage I. Elliptical, somewhat flattened, shiny
 lid. and thickened, faint slightly lumpy
 All smooth shiny translucent whitish
 good giving a green tint. Hd small white
 in 2. Spines long depressed, single with
 a false central part. 1.1 x 1.0. 1.1 x 1.0. 1.1 x 1.0.
 3.4. 2 rows on the head. appearance of gentle
 normal as in Johnston, which is whitish
 alternate over 7, 11 & 2d row from
 normal. S-V rows equally long and
 alike uniform. S-V ridge a little more
 of a yellowish whitish.

Stage II. Elliptical, more flattened, 1.2
 times thickly covered with
 placed about the 2d margin
 of about equal length except
 again which are short and the
 point for intermediate. 3.4
 the long one before the first dorsal.

Stage III. Elliptical, more flattened, 1.2
 times thickly covered with
 placed about the 2d margin
 of about equal length except
 again which are short and the
 point for intermediate. 3.4
 the long one before the first dorsal.

[See 732]

2 lost hours and from Sept 3.

187

Diplophora luperi Taz. 10/1/1907.

Egg Ellipsoid, one extremity less & one end slightly depressed. Attended rim flattened & has coarse rounded teeth. Length 8 to 10 microns of egg envelope; its slight whitish, shiny rim with reddish reticulated. Pale blue-green turning red. $8 \times 5 \times 4$ microns.

Hatched (10/1) 1st larva pale gray. Head & thorax and feet. Body slender, active, solitarily, a pair of red-brown and blue pointed wings. 10-12. A broad, pointed stage showing the legs of 10 and very black around base. Hatching at a point on 13. The feet pale.

Shed 10/12 1st 5-6 microns slightly elongated. Head & thorax brown, with long slender, pointed, faintly whitish, and green, 2 broad, flat, whitish, 5th brown. Body compressed 10-13; a dark ventral line and coloring just to end of 13. 14-15. 16-17. 18-19. 20-21. 22-23. 24-25. 26-27. 28-29. 30-31. 32-33. 34-35. 36-37. 38-39. 40-41. 42-43. 44-45. 46-47. 48-49. 50-51. 52-53. 54-55. 56-57. 58-59. 60-61. 62-63. 64-65. 66-67. 68-69. 70-71. 72-73. 74-75. 76-77. 78-79. 80-81. 82-83. 84-85. 86-87. 88-89. 90-91. 92-93. 94-95. 96-97. 98-99. 100-101. 102-103. 104-105. 106-107. 108-109. 110-111. 112-113. 114-115. 116-117. 118-119. 120-121. 122-123. 124-125. 126-127. 128-129. 130-131. 132-133. 134-135. 136-137. 138-139. 140-141. 142-143. 144-145. 146-147. 148-149. 150-151. 152-153. 154-155. 156-157. 158-159. 160-161. 162-163. 164-165. 166-167. 168-169. 170-171. 172-173. 174-175. 176-177. 178-179. 180-181. 182-183. 184-185. 186-187. 188-189. 190-191. 192-193. 194-195. 196-197. 198-199. 200-201. 202-203. 204-205. 206-207. 208-209. 210-211. 212-213. 214-215. 216-217. 218-219. 220-221. 222-223. 224-225. 226-227. 228-229. 230-231. 232-233. 234-235. 236-237. 238-239. 240-241. 242-243. 244-245. 246-247. 248-249. 250-251. 252-253. 254-255. 256-257. 258-259. 260-261. 262-263. 264-265. 266-267. 268-269. 270-271. 272-273. 274-275. 276-277. 278-279. 280-281. 282-283. 284-285. 286-287. 288-289. 290-291. 292-293. 294-295. 296-297. 298-299. 300-301. 302-303. 304-305. 306-307. 308-309. 310-311. 312-313. 314-315. 316-317. 318-319. 320-321. 322-323. 324-325. 326-327. 328-329. 330-331. 332-333. 334-335. 336-337. 338-339. 340-341. 342-343. 344-345. 346-347. 348-349. 350-351. 352-353. 354-355. 356-357. 358-359. 360-361. 362-363. 364-365. 366-367. 368-369. 370-371. 372-373. 374-375. 376-377. 378-379. 380-381. 382-383. 384-385. 386-387. 388-389. 390-391. 392-393. 394-395. 396-397. 398-399. 400-401. 402-403. 404-405. 406-407. 408-409. 410-411. 412-413. 414-415. 416-417. 418-419. 420-421. 422-423. 424-425. 426-427. 428-429. 430-431. 432-433. 434-435. 436-437. 438-439. 440-441. 442-443. 444-445. 446-447. 448-449. 450-451. 452-453. 454-455. 456-457. 458-459. 460-461. 462-463. 464-465. 466-467. 468-469. 470-471. 472-473. 474-475. 476-477. 478-479. 480-481. 482-483. 484-485. 486-487. 488-489. 490-491. 492-493. 494-495. 496-497. 498-499. 500-501. 502-503. 504-505. 506-507. 508-509. 510-511. 512-513. 514-515. 516-517. 518-519. 520-521. 522-523. 524-525. 526-527. 528-529. 530-531. 532-533. 534-535. 536-537. 538-539. 540-541. 542-543. 544-545. 546-547. 548-549. 550-551. 552-553. 554-555. 556-557. 558-559. 560-561. 562-563. 564-565. 566-567. 568-569. 570-571. 572-573. 574-575. 576-577. 578-579. 580-581. 582-583. 584-585. 586-587. 588-589. 590-591. 592-593. 594-595. 596-597. 598-599. 600-601. 602-603. 604-605. 606-607. 608-609. 610-611. 612-613. 614-615. 616-617. 618-619. 620-621. 622-623. 624-625. 626-627. 628-629. 630-631. 632-633. 634-635. 636-637. 638-639. 640-641. 642-643. 644-645. 646-647. 648-649. 650-651. 652-653. 654-655. 656-657. 658-659. 660-661. 662-663. 664-665. 666-667. 668-669. 670-671. 672-673. 674-675. 676-677. 678-679. 680-681. 682-683. 684-685. 686-687. 688-689. 690-691. 692-693. 694-695. 696-697. 698-699. 700-701. 702-703. 704-705. 706-707. 708-709. 710-711. 712-713. 714-715. 716-717. 718-719. 720-721. 722-723. 724-725. 726-727. 728-729. 730-731. 732-733. 734-735. 736-737. 738-739. 740-741. 742-743. 744-745. 746-747. 748-749. 750-751. 752-753. 754-755. 756-757. 758-759. 760-761. 762-763. 764-765. 766-767. 768-769. 770-771. 772-773. 774-775. 776-777. 778-779. 780-781. 782-783. 784-785. 786-787. 788-789. 790-791. 792-793. 794-795. 796-797. 798-799. 800-801. 802-803. 804-805. 806-807. 808-809. 810-811. 812-813. 814-815. 816-817. 818-819. 820-821. 822-823. 824-825. 826-827. 828-829. 830-831. 832-833. 834-835. 836-837. 838-839. 840-841. 842-843. 844-845. 846-847. 848-849. 850-851. 852-853. 854-855. 856-857. 858-859. 860-861. 862-863. 864-865. 866-867. 868-869. 870-871. 872-873. 874-875. 876-877. 878-879. 880-881. 882-883. 884-885. 886-887. 888-889. 890-891. 892-893. 894-895. 896-897. 898-899. 900-901. 902-903. 904-905. 906-907. 908-909. 910-911. 912-913. 914-915. 916-917. 918-919. 920-921. 922-923. 924-925. 926-927. 928-929. 930-931. 932-933. 934-935. 936-937. 938-939. 940-941. 942-943. 944-945. 946-947. 948-949. 950-951. 952-953. 954-955. 956-957. 958-959. 960-961. 962-963. 964-965. 966-967. 968-969. 970-971. 972-973. 974-975. 976-977. 978-979. 980-981. 982-983. 984-985. 986-987. 988-989. 990-991. 992-993. 994-995. 996-997. 998-999. 1000-1001. 1002-1003. 1004-1005. 1006-1007. 1008-1009. 1010-1011. 1012-1013. 1014-1015. 1016-1017. 1018-1019. 1020-1021. 1022-1023. 1024-1025. 1026-1027. 1028-1029. 1030-1031. 1032-1033. 1034-1035. 1036-1037. 1038-1039. 1040-1041. 1042-1043. 1044-1045. 1046-1047. 1048-1049. 1050-1051. 1052-1053. 1054-1055. 1056-1057. 1058-1059. 1060-1061. 1062-1063. 1064-1065. 1066-1067. 1068-1069. 1070-1071. 1072-1073. 1074-1075. 1076-1077. 1078-1079. 1080-1081. 1082-1083. 1084-1085. 1086-1087. 1088-1089. 1090-1091. 1092-1093. 1094-1095. 1096-1097. 1098-1099. 1100-1101. 1102-1103. 1104-1105. 1106-1107. 1108-1109. 1110-1111. 1112-1113. 1114-1115. 1116-1117. 1118-1119. 1120-1121. 1122-1123. 1124-1125. 1126-1127. 1128-1129. 1130-1131. 1132-1133. 1134-1135. 1136-1137. 1138-1139. 1140-1141. 1142-1143. 1144-1145. 1146-1147. 1148-1149. 1150-1151. 1152-1153. 1154-1155. 1156-1157. 1158-1159. 1160-1161. 1162-1163. 1164-1165. 1166-1167. 1168-1169. 1170-1171. 1172-1173. 1174-1175. 1176-1177. 1178-1179. 1180-1181. 1182-1183. 1184-1185. 1186-1187. 1188-1189. 1190-1191. 1192-1193. 1194-1195. 1196-1197. 1198-1199. 1200-1201. 1202-1203. 1204-1205. 1206-1207. 1208-1209. 1210-1211. 1212-1213. 1214-1215. 1216-1217. 1218-1219. 1220-1221. 1222-1223. 1224-1225. 1226-1227. 1228-1229. 1230-1231. 1232-1233. 1234-1235. 1236-1237. 1238-1239. 1240-1241. 1242-1243. 1244-1245. 1246-1247. 1248-1249. 1250-1251. 1252-1253. 1254-1255. 1256-1257. 1258-1259. 1260-1261. 1262-1263. 1264-1265. 1266-1267. 1268-1269. 1270-1271. 1272-1273. 1274-1275. 1276-1277. 1278-1279. 1280-1281. 1282-1283. 1284-1285. 1286-1287. 1288-1289. 1290-1291. 1292-1293. 1294-1295. 1296-1297. 1298-1299. 1300-1301. 1302-1303. 1304-1305. 1306-1307. 1308-1309. 1310-1311. 1312-1313. 1314-1315. 1316-1317. 1318-1319. 1320-1321. 1322-1323. 1324-1325. 1326-1327. 1328-1329. 1330-1331. 1332-1333. 1334-1335. 1336-1337. 1338-1339. 1340-1341. 1342-1343. 1344-1345. 1346-1347. 1348-1349. 1350-1351. 1352-1353. 1354-1355. 1356-1357. 1358-1359. 1360-1361. 1362-1363. 1364-1365. 1366-1367. 1368-1369. 1370-1371. 1372-1373. 1374-1375. 1376-1377. 1378-1379. 1380-1381. 1382-1383. 1384-1385. 1386-1387. 1388-1389. 1390-1391. 1392-1393. 1394-1395. 1396-1397. 1398-1399. 1400-1401. 1402-1403. 1404-1405. 1406-1407. 1408-1409. 1410-1411. 1412-1413. 1414-1415. 1416-1417. 1418-1419. 1420-1421. 1422-1423. 1424-1425. 1426-1427. 1428-1429. 1430-1431. 1432-1433. 1434-1435. 1436-1437. 1438-1439. 1440-1441. 1442-1443. 1444-1445. 1446-1447. 1448-1449. 1450-1451. 1452-1453. 1454-1455. 1456-1457. 1458-1459. 1460-1461. 1462-1463. 1464-1465. 1466-1467. 1468-1469. 1470-1471. 1472-1473. 1474-1475. 1476-1477. 1478-1479. 1480-1481. 1482-1483. 1484-1485. 1486-1487. 1488-1489. 1490-1491. 1492-1493. 1494-1495. 1496-1497. 1498-1499. 1500-1501. 1502-1503. 1504-1505. 1506-1507. 1508-1509. 1510-1511. 1512-1513. 1514-1515. 1516-1517. 1518-1519. 1520-1521. 1522-1523. 1524-1525. 1526-1527. 1528-1529. 1530-1531. 1532-1533. 1534-1535. 1536-1537. 1538-1539. 1540-1541. 1542-1543. 1544-1545. 1546-1547. 1548-1549. 1550-1551. 1552-1553. 1554-1555. 1556-1557. 1558-1559. 1560-1561. 1562-1563. 1564-1565. 1566-1567. 1568-1569. 1570-1571. 1572-1573. 1574-1575. 1576-1577. 1578-1579. 1580-1581. 1582-1583. 1584-1585. 1586-1587. 1588-1589. 1590-1591. 1592-1593. 1594-1595. 1596-1597. 1598-1599. 1600-1601. 1602-1603. 1604-1605. 1606-1607. 1608-1609. 1610-1611. 1612-1613. 1614-1615. 1616-1617. 1618-1619. 1620-1621. 1622-1623. 1624-1625. 1626-1627. 1628-1629. 1630-1631. 1632-1633. 1634-1635. 1636-1637. 1638-1639. 1640-1641. 1642-1643. 1644-1645. 1646-1647. 1648-1649. 1650-1651. 1652-1653. 1654-1655. 1656-1657. 1658-1659. 1660-1661. 1662-1663. 1664-1665. 1666-1667. 1668-1669. 1670-1671. 1672-1673. 1674-1675. 1676-1677. 1678-1679. 1680-1681. 1682-1683. 1684-1685. 1686-1687. 1688-1689. 1690-1691. 1692-1693. 1694-1695. 1696-1697. 1698-1699. 1700-1701. 1702-1703. 1704-1705. 1706-1707. 1708-1709. 1710-1711. 1712-1713. 1714-1715. 1716-1717. 1718-1719. 1720-1721. 1722-1723. 1724-1725. 1726-1727. 1728-1729. 1730-1731. 1732-1733. 1734-1735. 1736-1737. 1738-1739. 1740-1741. 1742-1743. 1744-1745. 1746-1747. 1748-1749. 1750-1751. 1752-1753. 1754-1755. 1756-1757. 1758-1759. 1760-1761. 1762-1763. 1764-1765. 1766-1767. 1768-1769. 1770-1771. 1772-1773. 1774-1775. 1776-1777. 1778-1779. 1780-1781. 1782-1783. 1784-1785. 1786-1787. 1788-1789. 1790-1791. 1792-1793. 1794-1795. 1796-1797. 1798-1799. 1800-1801. 1802-1803. 1804-1805. 1806-1807. 1808-1809. 1810-1811. 1812-1813. 1814-1815. 1816-1817. 1818-1819. 1820-1821. 1822-1823. 1824-1825. 1826-1827. 1828-1829. 1830-1831. 1832-1833. 1834-1835. 1836-1837. 1838-1839. 1840-1841. 1842-1843. 1844-1845. 1846-1847. 1848-1849. 1850-1851. 1852-1853. 1854-1855. 1856-1857. 1858-1859. 1860-1861. 1862-1863. 1864-1865. 1866-1867. 1868-1869. 1870-1871. 1872-1873. 1874-1875. 1876-1877. 1878-1879. 1880-1881. 1882-1883. 1884-1885. 1886-1887. 1888-1889. 1890-1891. 1892-1893. 1894-1895. 1896-1897. 1898-1899. 1900-1901. 1902-1903. 1904-1905. 1906-1907. 1908-1909. 1910-1911. 1912-1913. 1914-1915. 1916-1917. 1918-1919. 1920-1921. 1922-1923. 1924-1925. 1926-1927. 1928-1929. 1930-1931. 1932-1933. 1934-1935. 1936-1937. 1938-1939. 1940-1941. 1942-1943. 1944-1945. 1946-1947. 1948-1949. 1950-1951. 1952-1953. 1954-1955. 1956-1957. 1958-1959. 1960-1961. 1962-1963. 1964-1965. 1966-1967. 1968-1969. 1970-1971. 1972-1973. 1974-1975. 1976-1977. 1978-1979. 1980-1981. 1982-1983. 1984-1985. 1986-1987. 1988-1989. 1990-1991. 1992-1993. 1994-1995. 1996-1997. 1998-1999. 2000-2001. 2002-2003. 2004-2005. 2006-2007. 2008-2009. 2010-2011. 2012-2013. 2014-2015. 2016-2017. 2018-2019. 2020-2021. 2022-2023. 2024-2025. 2026-2027. 2028-2029. 2030-2031. 2032-2033. 2034-2035. 2036-2037. 2038-2039. 2040-2041. 2042-2043. 2044-2045. 2046-2047. 2048-2049. 2050-2051. 2052-2053. 2054-2055. 2056-2057. 2058-2059. 2060-2061. 2062-2063. 2064-2065. 2066-2067. 2068-2069. 2070-2071. 2072-2073. 2074-2075. 2076-2077. 2078-2079. 2080-2081. 2082-2083. 2084-2085. 2086-2087. 2088-2089. 2090-2091. 2092-2093. 2094-2095. 2096-2097. 2098-2099. 2100-2101. 2102-2103. 2104-2105. 2106-2107. 2108-2109. 2110-2111. 2112-2113. 2114-2115. 2116-2117. 2118-2119. 2120-2121. 2122-2123. 2124-2125. 2126-2127. 2128-2129. 2130-2131. 2132-2133. 2134-2135. 2136-2137. 2138-2139. 2140-2141. 2142-2143. 2144-2145. 2146-2147. 2148-2149. 2150-2151. 2152-2153. 2154-2155. 2156-2157. 2158-2159. 2160-2161. 2162-2163. 2164-2165. 2166-2167. 2168-2169. 2170-2171. 2172-2173. 2174-2175. 2176-2177. 2178-2179. 2180-2181. 2182-2183. 2184-2185. 2186-2187. 2188-2189. 2190-2191. 2192-2193. 2194-2195. 2196-2197. 2198-2199. 2200-2201. 2202-2203. 2204-2205. 2206-2207. 2208-2209. 2210-2211. 2212-2213. 2214-2215. 2216-2217. 2218-2219. 2220-2221. 2222-2223. 2224-2225. 2226-2227. 2228-2229. 2230-2231. 2232-2233. 2234-2235. 2236-2237. 2238-2239. 2240-2241. 2242-2243. 2244-2245. 2246-2247. 2248-2249. 2250-2251. 2252-2253. 2254-2255. 2256-2257. 2258-2259. 2260-2261. 2262-2263. 2264-2265. 2266-2267. 2268-2269. 2270-2271. 2272-2273. 2274-2275. 2276-2277. 2278-2279. 2280-2281. 2282-2283. 2284-2285. 2286-2287. 2288-2289. 2290-2291. 2292-2293. 2294-2295. 2296-2297. 2298-2299. 2300-2301. 2302-2303. 2304-2305. 2306-2307. 2308-2309. 2310-2311. 2312-2313. 2314-2315. 2316-2317. 2318-2319. 2320-2321. 2322-2323. 2324-2325. 2326-2327. 2328-2329. 2330-2331. 2332-2333. 2334-2335. 2336-2337. 2338-2339. 2340-2341. 2342-2343. 2344-2345. 2346-2347. 2348-2349. 2350-2351. 2352-2353. 2354-2355. 2356-2357. 2358-2359. 2360-2361. 2362-2363. 2364-2365. 2366-2367. 2368-2369. 2370-2371. 2372-2373. 2374-2375. 2376-2377.

54 winged, black, head red, 1st/2nd large, black,
 some 11-12 like 4-5, 6-9 small yellow, 10-12 small, 13-14
 on base 11-12 small, 13-14, 15-16, 17-18, 19-20, 21-22, 23-24, 25-26, 27-28, 29-30, 31-32, 33-34, 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 47-48, 49-50, 51-52, 53-54, 55-56, 57-58, 59-60, 61-62, 63-64, 65-66, 67-68, 69-70, 71-72, 73-74, 75-76, 77-78, 79-80, 81-82, 83-84, 85-86, 87-88, 89-90, 91-92, 93-94, 95-96, 97-98, 99-100, 101-102, 103-104, 105-106, 107-108, 109-110, 111-112, 113-114, 115-116, 117-118, 119-120, 121-122, 123-124, 125-126, 127-128, 129-130, 131-132, 133-134, 135-136, 137-138, 139-140, 141-142, 143-144, 145-146, 147-148, 149-150, 151-152, 153-154, 155-156, 157-158, 159-160, 161-162, 163-164, 165-166, 167-168, 169-170, 171-172, 173-174, 175-176, 177-178, 179-180, 181-182, 183-184, 185-186, 187-188, 189-190, 191-192, 193-194, 195-196, 197-198, 199-200, 201-202, 203-204, 205-206, 207-208, 209-210, 211-212, 213-214, 215-216, 217-218, 219-220, 221-222, 223-224, 225-226, 227-228, 229-230, 231-232, 233-234, 235-236, 237-238, 239-240, 241-242, 243-244, 245-246, 247-248, 249-250, 251-252, 253-254, 255-256, 257-258, 259-260, 261-262, 263-264, 265-266, 267-268, 269-270, 271-272, 273-274, 275-276, 277-278, 279-280, 281-282, 283-284, 285-286, 287-288, 289-290, 291-292, 293-294, 295-296, 297-298, 299-300, 301-302, 303-304, 305-306, 307-308, 309-310, 311-312, 313-314, 315-316, 317-318, 319-320, 321-322, 323-324, 325-326, 327-328, 329-330, 331-332, 333-334, 335-336, 337-338, 339-340, 341-342, 343-344, 345-346, 347-348, 349-350, 351-352, 353-354, 355-356, 357-358, 359-360, 361-362, 363-364, 365-366, 367-368, 369-370, 371-372, 373-374, 375-376, 377-378, 379-380, 381-382, 383-384, 385-386, 387-388, 389-390, 391-392, 393-394, 395-396, 397-398, 399-400, 401-402, 403-404, 405-406, 407-408, 409-410, 411-412, 413-414, 415-416, 417-418, 419-420, 421-422, 423-424, 425-426, 427-428, 429-430, 431-432, 433-434, 435-436, 437-438, 439-440, 441-442, 443-444, 445-446, 447-448, 449-450, 451-452, 453-454, 455-456, 457-458, 459-460, 461-462, 463-464, 465-466, 467-468, 469-470, 471-472, 473-474, 475-476, 477-478, 479-480, 481-482, 483-484, 485-486, 487-488, 489-490, 491-492, 493-494, 495-496, 497-498, 499-500, 501-502, 503-504, 505-506, 507-508, 509-510, 511-512, 513-514, 515-516, 517-518, 519-520, 521-522, 523-524, 525-526, 527-528, 529-530, 531-532, 533-534, 535-536, 537-538, 539-540, 541-542, 543-544, 545-546, 547-548, 549-550, 551-552, 553-554, 555-556, 557-558, 559-560, 561-562, 563-564, 565-566, 567-568, 569-570, 571-572, 573-574, 575-576, 577-578, 579-580, 581-582, 583-584, 585-586, 587-588, 589-590, 591-592, 593-594, 595-596, 597-598, 599-600, 601-602, 603-604, 605-606, 607-608, 609-610, 611-612, 613-614, 615-616, 617-618, 619-620, 621-622, 623-624, 625-626, 627-628, 629-630, 631-632, 633-634, 635-636, 637-638, 639-640, 641-642, 643-644, 645-646, 647-648, 649-650, 651-652, 653-654, 655-656, 657-658, 659-660, 661-662, 663-664, 665-666, 667-668, 669-670, 671-672, 673-674, 675-676, 677-678, 679-680, 681-682, 683-684, 685-686, 687-688, 689-690, 691-692, 693-694, 695-696, 697-698, 699-700, 701-702, 703-704, 705-706, 707-708, 709-710, 711-712, 713-714, 715-716, 717-718, 719-720, 721-722, 723-724, 725-726, 727-728, 729-730, 731-732, 733-734, 735-736, 737-738, 739-740, 741-742, 743-744, 745-746, 747-748, 749-750, 751-752, 753-754, 755-756, 757-758, 759-760, 761-762, 763-764, 765-766, 767-768, 769-770, 771-772, 773-774, 775-776, 777-778, 779-780, 781-782, 783-784, 785-786, 787-788, 789-790, 791-792, 793-794, 795-796, 797-798, 799-800, 801-802, 803-804, 805-806, 807-808, 809-810, 811-812, 813-814, 815-816, 817-818, 819-820, 821-822, 823-824, 825-826, 827-828, 829-830, 831-832, 833-834, 835-836, 837-838, 839-840, 841-842, 843-844, 845-846, 847-848, 849-850, 851-852, 853-854, 855-856, 857-858, 859-860, 861-862, 863-864, 865-866, 867-868, 869-870, 871-872, 873-874, 875-876, 877-878, 879-880, 881-882, 883-884, 885-886, 887-888, 889-890, 891-892, 893-894, 895-896, 897-898, 899-900, 901-902, 903-904, 905-906, 907-908, 909-910, 911-912, 913-914, 915-916, 917-918, 919-920, 921-922, 923-924, 925-926, 927-928, 929-930, 931-932, 933-934, 935-936, 937-938, 939-940, 941-942, 943-944, 945-946, 947-948, 949-950, 951-952, 953-954, 955-956, 957-958, 959-960, 961-962, 963-964, 965-966, 967-968, 969-970, 971-972, 973-974, 975-976, 977-978, 979-980, 981-982, 983-984, 985-986, 987-988, 989-990, 991-992, 993-994, 995-996, 997-998, 999-1000, 1001-1002, 1003-1004, 1005-1006, 1007-1008, 1009-1010, 1011-1012, 1013-1014, 1015-1016, 1017-1018, 1019-1020, 1021-1022, 1023-1024, 1025-1026, 1027-1028, 1029-1030, 1031-1032, 1033-1034, 1035-1036, 1037-1038, 1039-1040, 1041-1042, 1043-1044, 1045-1046, 1047-1048, 1049-1050, 1051-1052, 1053-1054, 1055-1056, 1057-1058, 1059-1060, 1061-1062, 1063-1064, 1065-1066, 1067-1068, 1069-1070, 1071-1072, 1073-1074, 1075-1076, 1077-1078, 1079-1080, 1081-1082, 1083-1084, 1085-1086, 1087-1088, 1089-1090, 1091-1092, 1093-1094, 1095-1096, 1097-1098, 1099-1100, 1101-1102, 1103-1104, 1105-1106, 1107-1108, 1109-1110, 1111-1112, 1113-1114, 1115-1116, 1117-1118, 1119-1120, 1121-1122, 1123-1124, 1125-1126, 1127-1128, 1129-1130, 1131-1132, 1133-1134, 1135-1136, 1137-1138, 1139-1140, 1141-1142, 1143-1144, 1145-1146, 1147-1148, 1149-1150, 1151-1152, 1153-1154, 1155-1156, 1157-1158, 1159-1160, 1161-1162, 1163-1164, 1165-1166, 1167-1168, 1169-1170, 1171-1172, 1173-1174, 1175-1176, 1177-1178, 1179-1180, 1181-1182, 1183-1184, 1185-1186, 1187-1188, 1189-1190, 1191-1192, 1193-1194, 1195-1196, 1197-1198, 1199-1200, 1201-1202, 1203-1204, 1205-1206, 1207-1208, 1209-1210, 1211-1212, 1213-1214, 1215-1216, 1217-1218, 1219-1220, 1221-1222, 1223-1224, 1225-1226, 1227-1228, 1229-1230, 1231-1232, 1233-1234, 1235-1236, 1237-1238, 1239-1240, 1241-1242, 1243-1244, 1245-1246, 1247-1248, 1249-1250, 1251-1252, 1253-1254, 1255-1256, 1257-1258, 1259-1260, 1261-1262, 1263-1264, 1265-1266, 1267-1268, 1269-1270, 1271-1272, 1273-1274, 1275-1276, 1277-1278, 1279-1280, 1281-1282, 1283-1284, 1285-1286, 1287-1288, 1289-1290, 1291-1292, 1293-1294, 1295-1296, 1297-1298, 1299-1300, 1301-1302, 1303-1304, 1305-1306, 1307-1308, 1309-1310, 1311-1312, 1313-1314, 1315-1316, 1317-1318, 1319-1320, 1321-1322, 1323-1324, 1325-1326, 1327-1328, 1329-1330, 1331-1332, 1333-1334, 1335-1336, 1337-1338, 1339-1340, 1341-1342, 1343-1344, 1345-1346, 1347-1348, 1349-1350, 1351-1352, 1353-1354, 1355-1356, 1357-1358, 1359-1360, 1361-1362, 1363-1364, 1365-1366, 1367-1368, 1369-1370, 1371-1372, 1373-1374, 1375-1376, 1377-1378, 1379-1380, 1381-1382, 1383-1384, 1385-1386, 1387-1388, 1389-1390, 1391-1392, 1393-1394, 1395-1396, 1397-1398, 1399-1400, 1401-1402, 1403-1404, 1405-1406, 1407-1408, 1409-1410, 1411-1412, 1413-1414, 1415-1416, 1417-1418, 1419-1420, 1421-1422, 1423-1424, 1425-1426, 1427-1428, 1429-1430, 1431-1432, 1433-1434, 1435-1436, 1437-1438, 1439-1440, 1441-1442, 1443-1444, 1445-1446, 1447-1448, 1449-1450, 1451-1452, 1453-1454, 1455-1456, 1457-1458, 1459-1460, 1461-1462, 1463-1464, 1465-1466, 1467-1468, 1469-1470, 1471-1472, 1473-1474, 1475-1476, 1477-1478, 1479-1480, 1481-1482, 1483-1484, 1485-1486, 1487-1488, 1489-1490, 1491-1492, 1493-1494, 1495-1496, 1497-1498, 1499-1500, 1501-1502, 1503-1504, 1505-1506, 1507-1508, 1509-1510, 1511-1512, 1513-1514, 1515-1516, 1517-1518, 1519-1520, 1521-1522, 1523-1524, 1525-1526, 1527-1528, 1529-1530, 1531-1532, 1533-1534, 1535-1536, 1537-1538, 1539-1540, 1541-1542, 1543-1544, 1545-1546, 1547-1548, 1549-1550, 1551-1552, 1553-1554, 1555-1556, 1557-1558, 1559-1560, 1561-1562, 1563-1564, 1565-1566, 1567-1568, 1569-1570, 1571-1572, 1573-1574, 1575-1576, 1577-1578, 1579-1580, 1581-1582, 1583-1584, 1585-1586, 1587-1588, 1589-1590, 1591-1592, 1593-1594, 1595-1596, 1597-1598, 1599-1600, 1601-1602, 1603-1604, 1605-1606, 1607-1608, 1609-1610, 1611-1612, 1613-1614, 1615-1616, 1617-1618, 1619-1620, 1621-1622, 1623-1624, 1625-1626, 1627-1628, 1629-1630, 1631-1632, 1633-1634, 1635-1636, 1637-1638, 1639-1640, 1641-1642, 1643-1644, 1645-1646, 1647-1648, 1649-1650, 1651-1652, 1653-1654, 1655-1656, 1657-1658, 1659-1660, 1661-1662, 1663-1664, 1665-1666, 1667-1668, 1669-1670, 1671-1672, 1673-1674, 1675-1676, 1677-1678, 1679-1680, 1681-1682, 1683-1684, 1685-1686, 1687-1688, 1689-1690, 1691-1692, 1693-1694, 1695-1696, 1697-1698, 1699-1700, 1701-1702, 1703-1704, 1705-1706, 1707-1708, 1709-1710, 1711-1712, 1713-1714, 1715-1716, 1717-1718, 1719-1720, 1721-1722, 1723-1724, 1725-1726, 1727-1728, 1729-1730, 1731-1732, 1733-1734, 1735-1736, 1737-1738, 1739-1740, 1741-1742, 1743-1744, 1745-1746, 1747-1748, 1749-1750, 1751-1752, 1753-1754, 1755-1756, 1757-1758, 1759-1760, 1761-1762, 1763-1764, 1765-1766, 1767-1768, 1769-1770, 1771-1772, 1773-1774, 1775-1776, 1777-1778, 1779-1780, 1781-1782, 1783-1784, 1785-1786, 1787-1788, 1789-1790, 1791-1792, 1793-1794, 1795-1796, 1797-1798, 1799-1800, 1801-1802, 1803-1804, 1805-1806, 1807-1808, 1809-1810, 1811-1812, 1813-1814, 1815-1816, 1817-1818, 1819-1820, 1821-1822, 1823-1824, 1825-1826, 1827-1828, 1829-1830, 1831-1832, 1833-1834, 1835-1836, 1837-1838, 1839-1840, 1841-1842, 1843-1844, 1845-1846, 1847-1848, 1849-1850, 1851-1852, 1853-1854, 1855-1856, 1857-1858, 1859-1860, 1861-1862, 1863-1864, 1865-1866, 1867-1868, 1869-1870, 1871-1872, 1873-1874, 1875-1876, 1877-1878, 1879-1880, 1881-1882, 1883-1884, 1885-1886, 1887-1888, 1889-1890, 1891-1892, 1893-1894, 1895-1896, 1897-1898, 1899-1900, 1901-1902, 1903-1904, 1905-1906, 1907-1908, 1909-1910, 1911-1912, 1913-1914, 1915-1916, 1917-1918, 1919-1920, 1921-1922, 1923-1924, 1925-1926, 1927-1928, 1929-1930, 1931-1932, 1933-1934, 1935-1936, 1937-1938, 1939-1940, 1941-1942, 1943-1944, 1945-1946, 1947-1948, 1949-1950, 1951-1952, 1953-1954, 1955-1956, 1957-1958, 1959-1960, 1961-1962, 1963-1964, 1965-1966, 1967-1968, 1969-1970, 1971-1972, 1973-1974, 1975-1976, 1977-1978, 1979-1980, 1981-1982, 1983-1984, 1985-1986, 1987-1988, 1989-1990, 1991-1992, 1993-1994, 1995-1996, 1997-1998, 1999-2000, 2001-2002, 2003-2004, 2005-2006, 2007-2008, 2009-2010, 2011-2012, 2013-2014, 2015-2016, 2017-2018, 2019-2020, 2021-2022, 2023-2024, 2025-2026, 2027-2028, 2029-2030, 2031-2032, 2033-2034, 2035-2036, 2037-2038, 2039-2040, 2041-2042, 2043-2044, 2045-2046, 2047-2048, 2049-2050, 2051-2052, 2053-2054, 2055-2056, 2057-2058, 2059-2060, 2061-2062, 2063-2064, 2065-2066, 2067-2068, 2069-2070, 2071-2072, 2073-2074, 2075-2076, 2077-2078, 2079-2080, 2081-2082, 2083-2084, 2085-2086, 2087-2088, 2089-2090, 2091-2092, 2093-2094, 2095-2096, 2097-2098, 2099-2100, 2101-2102, 2103-2104, 2105-2106, 2107-2108, 2109-2110, 2111-2112, 2113-2114, 2115-2116, 2117-2118, 2119-2120, 2121-2122, 2123-2124, 2125-2126, 2127-2128, 2129-2130, 2131-2132, 2133-2134, 2135-2136, 2137-2138, 2139-2140, 2141-2142, 2143-2144, 2145-2146, 2147-2148, 2149-2150, 2151-2152, 2153-2154, 2155-2156, 2157-2158, 2159-2160, 2161-2162, 2163-2164, 2165-2166, 2167-2168, 2169-2170, 2171-2172, 2173-2174, 2175-2176, 2177-2178, 2179-2180, 2181-2182, 2183-2184, 2185-2186, 2187-2188, 2189-2190, 2191-2192, 2193-2194, 2195-2196, 2197-2198, 2199-2200, 2201-2202, 2203-2204, 2205-2206, 2207-2208, 2209-2210, 2211-2212, 2213-2214, 2215-2216, 2217-2218, 2219-2220, 2221-2222, 2223-2224, 2225-2226, 2227-2228, 2229-2230, 2231-2232, 2233-2234, 2235-2236, 2237-2238, 2239-2240, 2241-2242, 2243-2244, 2245-2246, 2247-2248, 2249-2250, 2251-2252, 2253-2254, 2255-2256, 2257-2258, 2259-2260, 2261-2262, 2263-2264, 2265-2266, 2267-2268, 2269-2270, 2271-2272, 2273-2274, 2275-2276, 2277-2278, 2279-2280, 2281-2282, 2283-2284, 2285-2286, 2287-2288, 2289-2290, 2291-2292, 2293-2294, 2295-2296, 2297-2298, 2299-2300, 2301-2302, 2303-2304, 2305-2306, 2307-2308, 2309-2310, 2311-2312, 2313-2314, 2315-2316, 2317-2318, 2319-2320, 2321-2322, 2323-2324, 2325-2326, 2327-2328, 2329-2330, 2331-2332, 2333-2334, 2335-2336, 2337-2338, 2339-2340, 2341-2342, 2343-2344, 2345-2346, 2347-2348, 2349-2350, 2351-2352, 2353-2354, 2355-2356, 2357-2358, 2359-2360, 2361-2362, 2363-2364, 2365-2366, 2367-2368, 2369-2370, 2371-2372, 2373-2374, 2375-2376, 2377-2378, 2379-2380, 2381-2382, 2383-2384, 2385-2386, 2387-2388, 2389-2390, 2391-2392, 2393-2394, 2395-2396, 2397-2398, 2399-2400, 2401-2402, 2403-2404, 2405-2406, 2407-2408, 2409-2410, 2411-2412, 2413-2414, 2415-2416, 2417-2418, 2419-2420, 2421-2422, 2423-2424, 2425-2426, 2427-2428, 2429-2430, 2431-2432, 2433-2434, 2435-24

1392

egg on any one bush June 7 1908, probably from
the various cocoons which issued first but some
of the Bupal ones were out. Elliptical flattened
surrounding thick shiny covering. Dimensions
width 1.8 x 1.2. Early on back of feet 1-10
Hatched June 12 1.3 mm elliptical slender flattened
conical sides sloping more slender shape. Head
small 0.4-5, 11-12 large feet subequal colorless
whitish shiny, then smooth or with yellowish line
of brown spots ① 3-5, 11-13 2-banded, 6-10 2-banded
② 3, 4, 12 3-banded 6-11 2-banded. Head brown and
regular more adaxial 8 not longer.

June 14 1.5 cat. and June 15 all transparent white
June 16 2.0 cat. and June 17 2.5 cat. and June 18 3.0 cat.
June 19 3.5 cat. and June 20 4.0 cat. and June 21 4.5 cat.
June 22 5.0 cat. and June 23 5.5 cat. and June 24 6.0 cat.
June 25 6.5 cat. and June 26 7.0 cat. and June 27 7.5 cat.
June 28 8.0 cat. and June 29 8.5 cat. and June 30 9.0 cat.
July 1 9.5 cat. and July 2 10.0 cat. and July 3 10.5 cat.
July 4 11.0 cat. and July 5 11.5 cat. and July 6 12.0 cat.
July 7 12.5 cat. and July 8 13.0 cat. and July 9 13.5 cat.
July 10 14.0 cat. and July 11 14.5 cat. and July 12 15.0 cat.
July 13 15.5 cat. and July 14 16.0 cat. and July 15 16.5 cat.
July 16 17.0 cat. and July 17 17.5 cat. and July 18 18.0 cat.
July 19 18.5 cat. and July 20 19.0 cat. and July 21 19.5 cat.
July 22 20.0 cat. and July 23 20.5 cat. and July 24 21.0 cat.
July 25 21.5 cat. and July 26 22.0 cat. and July 27 22.5 cat.
July 28 23.0 cat. and July 29 23.5 cat. and July 30 24.0 cat.
August 1 24.5 cat. and August 2 25.0 cat. and August 3 25.5 cat.
August 4 26.0 cat. and August 5 26.5 cat. and August 6 27.0 cat.
August 7 27.5 cat. and August 8 28.0 cat. and August 9 28.5 cat.
August 10 29.0 cat. and August 11 29.5 cat. and August 12 30.0 cat.
August 13 30.5 cat. and August 14 31.0 cat. and August 15 31.5 cat.
August 16 32.0 cat. and August 17 32.5 cat. and August 18 33.0 cat.
August 19 33.5 cat. and August 20 34.0 cat. and August 21 34.5 cat.
August 22 35.0 cat. and August 23 35.5 cat. and August 24 36.0 cat.
August 25 36.5 cat. and August 26 37.0 cat. and August 27 37.5 cat.
August 28 38.0 cat. and August 29 38.5 cat. and August 30 39.0 cat.
September 1 39.5 cat. and September 2 40.0 cat. and September 3 40.5 cat.
September 4 41.0 cat. and September 5 41.5 cat. and September 6 42.0 cat.
September 7 42.5 cat. and September 8 43.0 cat. and September 9 43.5 cat.
September 10 44.0 cat. and September 11 44.5 cat. and September 12 45.0 cat.
September 13 45.5 cat. and September 14 46.0 cat. and September 15 46.5 cat.
September 16 47.0 cat. and September 17 47.5 cat. and September 18 48.0 cat.
September 19 48.5 cat. and September 20 49.0 cat. and September 21 49.5 cat.
September 22 50.0 cat. and September 23 50.5 cat. and September 24 51.0 cat.
September 25 51.5 cat. and September 26 52.0 cat. and September 27 52.5 cat.
September 28 53.0 cat. and September 29 53.5 cat. and September 30 54.0 cat.
October 1 54.5 cat. and October 2 55.0 cat. and October 3 55.5 cat.
October 4 56.0 cat. and October 5 56.5 cat. and October 6 57.0 cat.
October 7 57.5 cat. and October 8 58.0 cat. and October 9 58.5 cat.
October 10 59.0 cat. and October 11 59.5 cat. and October 12 60.0 cat.
October 13 60.5 cat. and October 14 61.0 cat. and October 15 61.5 cat.
October 16 62.0 cat. and October 17 62.5 cat. and October 18 63.0 cat.
October 19 63.5 cat. and October 20 64.0 cat. and October 21 64.5 cat.
October 22 65.0 cat. and October 23 65.5 cat. and October 24 66.0 cat.
October 25 66.5 cat. and October 26 67.0 cat. and October 27 67.5 cat.
October 28 68.0 cat. and October 29 68.5 cat. and October 30 69.0 cat.
November 1 69.5 cat. and November 2 70.0 cat. and November 3 70.5 cat.
November 4 71.0 cat. and November 5 71.5 cat. and November 6 72.0 cat.
November 7 72.5 cat. and November 8 73.0 cat. and November 9 73.5 cat.
November 10 74.0 cat. and November 11 74.5 cat. and November 12 75.0 cat.
November 13 75.5 cat. and November 14 76.0 cat. and November 15 76.5 cat.
November 16 77.0 cat. and November 17 77.5 cat. and November 18 78.0 cat.
November 19 78.5 cat. and November 20 79.0 cat. and November 21 79.5 cat.
November 22 80.0 cat. and November 23 80.5 cat. and November 24 81.0 cat.
November 25 81.5 cat. and November 26 82.0 cat. and November 27 82.5 cat.
November 28 83.0 cat. and November 29 83.5 cat. and November 30 84.0 cat.
December 1 84.5 cat. and December 2 85.0 cat. and December 3 85.5 cat.
December 4 86.0 cat. and December 5 86.5 cat. and December 6 87.0 cat.
December 7 87.5 cat. and December 8 88.0 cat. and December 9 88.5 cat.
December 10 89.0 cat. and December 11 89.5 cat. and December 12 90.0 cat.
December 13 90.5 cat. and December 14 91.0 cat. and December 15 91.5 cat.
December 16 92.0 cat. and December 17 92.5 cat. and December 18 93.0 cat.
December 19 93.5 cat. and December 20 94.0 cat. and December 21 94.5 cat.
December 22 95.0 cat. and December 23 95.5 cat. and December 24 96.0 cat.
December 25 96.5 cat. and December 26 97.0 cat. and December 27 97.5 cat.
December 28 98.0 cat. and December 29 98.5 cat. and December 30 99.0 cat.
January 1 99.5 cat. and January 2 100.0 cat. and January 3 100.5 cat.
January 4 101.0 cat. and January 5 101.5 cat. and January 6 102.0 cat.
January 7 102.5 cat. and January 8 103.0 cat. and January 9 103.5 cat.
January 10 104.0 cat. and January 11 104.5 cat. and January 12 105.0 cat.
January 13 105.5 cat. and January 14 106.0 cat. and January 15 106.5 cat.
January 16 107.0 cat. and January 17 107.5 cat. and January 18 108.0 cat.
January 19 108.5 cat. and January 20 109.0 cat. and January 21 109.5 cat.
January 22 110.0 cat. and January 23 110.5 cat. and January 24 111.0 cat.
January 25 111.5 cat. and January 26 112.0 cat. and January 27 112.5 cat.
January 28 113.0 cat. and January 29 113.5 cat. and January 30 114.0 cat.
February 1 114.5 cat. and February 2 115.0 cat. and February 3 115.5 cat.
February 4 116.0 cat. and February 5 116.5 cat. and February 6 117.0 cat.
February 7 117.5 cat. and February 8 118.0 cat. and February 9 118.5 cat.
February 10 119.0 cat. and February 11 119.5 cat. and February 12 120.0 cat.
February 13 120.5 cat. and February 14 121.0 cat. and February 15 121.5 cat.
February 16 122.0 cat. and February 17 122.5 cat. and February 18 123.0 cat.
February 19 123.5 cat. and February 20 124.0 cat. and February 21 124.5 cat.
February 22 125.0 cat. and February 23 125.5 cat. and February 24 126.0 cat.
February 25 126.5 cat. and February 26 127.0 cat. and February 27 127.5 cat.
February 28 128.0 cat. and February 29 128.5 cat. and February 30 129.0 cat.
March 1 129.5 cat. and March 2 130.0 cat. and March 3 130.5 cat.
March 4 131.0 cat. and March 5 131.5 cat. and March 6 132.0 cat.
March 7 132.5 cat. and March 8 133.0 cat. and March 9 133.5 cat.
March 10 134.0 cat. and March 11 134.5 cat. and March 12 135.0 cat.
March 13 135.5 cat. and March 14 136.0 cat. and March 15 136.5 cat.
March 16 137.0 cat. and March 17 137.5 cat. and March 18 138.0 cat.
March 19 138.5 cat. and March 20 139.0 cat. and March 21 139.5 cat.
March 22 140.0 cat. and March 23 140.5 cat. and March 24 141.0 cat.
March 25 141.5 cat. and March 26 142.0 cat. and March 27 142.5 cat.
March 28 143.0 cat. and March 29 143.5 cat. and March 30 144.0 cat.
April 1 144.5 cat. and April 2 145.0 cat. and April 3 145.5 cat.
April 4 146.0 cat. and April 5 146.5 cat. and April 6 147.0 cat.
April 7 147.5 cat. and April 8 148.0 cat. and April 9 148.5 cat.
April 10 149.0 cat. and April 11 149.5 cat. and April 12 150.0 cat.
April 13 150.5 cat. and April 14 151.0 cat. and April 15 151.5 cat.
April 16 152.0 cat. and April 17 152.5 cat. and April 18 153.0 cat.
April 19 153.5 cat. and April 20 154.0 cat. and April 21 154.5 cat.
April 22 155.0 cat. and April 23 155.5 cat. and April 24 156.0 cat.
April 25 156.5 cat. and April 26 157.0 cat. and April 27 157.5 cat.
April 28 158.0 cat. and April 29 158.5 cat. and April 30 159.0 cat.
May 1 159.5 cat. and May 2 160.0 cat. and May 3 160.5 cat.
May 4 161.0 cat. and May 5 161.5 cat. and May 6 162.0 cat.
May 7 162.5 cat. and May 8 163.0 cat. and May 9 163.5 cat.
May 10 164.0 cat. and May 11 164.5 cat. and May 12 165.0 cat.
May 13 165.5 cat. and May 14 166.0 cat. and May 15 166.5 cat.
May 16 167.0 cat. and May 17 167.5 cat. and May 18 168.0 cat.
May 19 168.5 cat. and May 20 169.0 cat. and May 21 169.5 cat.
May 22 170.0 cat. and May 23 170.5 cat. and May 24 171.0 cat.
May 25 171.5 cat. and May 26 172.0 cat. and May 27 172.5 cat.
May 28 173.0 cat. and May 29 173.5 cat. and May 30 174.0 cat.
June 1 174.5 cat. and June 2 175.0 cat. and June 3 175.5 cat.
June 4 176.0 cat. and June 5 176.5 cat. and June 6 177.0 cat.
June 7 177.5 cat. and June 8 178.0 cat. and June 9 178.5 cat.
June 10 179.0 cat. and June 11 179.5 cat. and June 12 180.0 cat.
June 13 180.5 cat. and June 14 181.0 cat. and June 15 181.5 cat.
June 16 182.0 cat. and June 17 182.5 cat. and June 18 183.0 cat.
June 19 183.5 cat. and June 20 184.0 cat. and June 21 184.5 cat.
June 22 185.0 cat. and June 23 185.5 cat. and June 24 186.0 cat.
June 25 186.5 cat. and June 26 187.0 cat. and June 27 187.5 cat.
June 28 188.0 cat. and June 29 188.5 cat. and June 30 189.0 cat.
July 1 189.5 cat. and July 2 190.0 cat. and July 3 190.5 cat.
July 4 191.0 cat. and July 5 191.5 cat. and July 6 192.0 cat.
July 7 192.5 cat. and July 8 193.0 cat. and July 9 193.5 cat.
July 10 194.0 cat. and July 11 194.5 cat. and July 12 195.0 cat.
July 13 195.5 cat. and July 14 196.0 cat. and July 15 196.5 cat.
July 16 197.0 cat. and July 17 197.5 cat. and July 18 198.0 cat.
July 19 198.5 cat. and July 20 199.0 cat. and July 21 199.5 cat.
July 22 200.0 cat. and July 23 200.5 cat. and July 24 201.0 cat.
July 25 201.5 cat. and July 26 202.0 cat. and July 27 202.5 cat.
July 28 203.0 cat. and July 29 203.5 cat. and July 30 204.0 cat.
August 1 204.5 cat. and August 2 205.0 cat. and August 3 205.5 cat.
August 4 206.0 cat. and August 5 206.5 cat. and August 6 207.0 cat.
August 7 207.5 cat. and August 8 208.0 cat. and August 9 208.5 cat.
August 10 209.0 cat. and August 11 209.5 cat. and August 12 210.0 cat.
August 13 210.5 cat. and August 14 211.0 cat. and August 15 211.5 cat.
August 16 212.0 cat. and August 17 212.5 cat. and August 18 213.0 cat.
August 19 213.5 cat. and August 20 214.0 cat. and August 21 214.5 cat.
August 22 215.0 cat. and August 23 215.5 cat. and August 24 216.0 cat.
August 25 216.5 cat. and August 26 217.0 cat. and August 27 217.5 cat.
August 28 218.0 cat. and August 29 218.5 cat. and August 30 219.0 cat.
September 1 219.5 cat. and September 2 220.0 cat. and September 3 220.5 cat.
September 4 221.0 cat. and September 5 221.5 cat. and September 6 222.0 cat.
September 7 222.5 cat. and September 8 223.0 cat. and September 9 223.5 cat.
September 10 224.0 cat. and September 11 224.5 cat. and September 12 225.0 cat.
September 13 225.5 cat. and September 14 226.0 cat. and September 15 226.5 cat.
September 16 227.0 cat. and September 17 227.5 cat. and September 18 228.0 cat.
September 19 228.5 cat. and September 20 229.0 cat. and September 21 229.5 cat.
September 22 230.0 cat. and September 23 230.5 cat. and September 24 231.0 cat.
September 25 231.5 cat. and September 26 232.0 cat. and September 27 232.5 cat.
September 28 233.0 cat. and September 29 233.5 cat. and September 30 234.0 cat.
October 1 234.5 cat. and October 2 235.0 cat. and October 3 235.5 cat.
October 4 236.0 cat. and October 5 236.5 cat. and October 6 237.0 cat.
October 7 237.5 cat. and October 8 238.0 cat. and October 9 238.5 cat.
October 10 239.0 cat. and October 11 239.5 cat. and October 12 240.0 cat.
October 13 240.5 cat. and October 14 241.0 cat. and October 15 241.5 cat.
October 16 242.0 cat. and October 17 242.5 cat. and October 18 243.0 cat.
October 19 243.5 cat. and October 20 244.0 cat. and October 21 244.5 cat.
October 22 245.0 cat. and October 23 245.5 cat. and October 24 246.0 cat.
October 25 246.5 cat. and October 26 247.0 cat. and October 27 247.5 cat.
October 28 248.0 cat. and October 29 248.5 cat. and October 30 249.0 cat.
November 1 249.5 cat. and November 2 250.0 cat. and November 3 250.5 cat.
November 4 251.0 cat. and November 5 251.5 cat. and November 6 252.0 cat.
November 7 252.5 cat. and November 8 253.0 cat. and November 9 253.5 cat.
November 10 254.0 cat. and November 11 254.5 cat. and November 12 255.0 cat.
November 13 255.5 cat. and November 14 256.0 cat. and November 15 256.5 cat.
November 16 257.0 cat. and November 17 257.5 cat. and November 18 258.0 cat.
November 19 258.5 cat. and November 20 259.0 cat. and November 21 259.5 cat.
November 22 260.0 cat. and November 23 260.5 cat. and November 24 261.0 cat.
November 25 261.5 cat. and November 26 262.0 cat. and November 27 262.5 cat.
November 28 263.0 cat. and November 29 263.5 cat. and November 30 264.0 cat.
December 1 264.5 cat. and December 2 265.0 cat. and December 3 265.5 cat.
December 4 266.0 cat. and December 5 266.5 cat. and December 6 267.0 cat.
December 7 267.5 cat. and December 8 268.0 cat. and December 9 268.5 cat.
December 10 269.0 cat. and December 11 269.5 cat. and December 12 270.0 cat.
December 13 270.5 cat. and December 14 271.0 cat. and December 15 271.5 cat.
December 16 272.0 cat. and December 17 272.5 cat. and December 18 273.0 cat.
December 19 273.5 cat. and December 20 274.0 cat. and December 21 274.5 cat.
December 22 275.0 cat. and December 23 275.5 cat. and December 24 276.0 cat.
December 25 276.5 cat. and December 26 277.0 cat. and December 27 277.5 cat.
December 28 278.0 cat. and December 29 278.5 cat. and December 30 279.0 cat.
January 1 279.5 cat. and January 2 280.0 cat. and January 3 280.5 cat.
January 4 281.0 cat. and January 5 281.5 cat. and January 6 282.0 cat.
January 7 282.5 cat. and January 8 283.0 cat. and January 9 283.5 cat.
January 10 284.0 cat. and January 11 284.5 cat. and January 12 285.0 cat.
January 13 285.5 cat. and January 14 286.0 cat. and January 15 286.5 cat.
January 16 287.0 cat. and January 17 287.5 cat. and January 18 288.0 cat.
January 19 288.5 cat. and January 20 289.0 cat. and January 21 289.5 cat.
January 22 290.0 cat. and January 23 290.5 cat. and January 24 291.0 cat.
January 25 291.5 cat. and January 26 292.0 cat. and January 27 292.5 cat.
January 28 293.0 cat. and January 29 293.5 cat. and January 30 294.0 cat.
February 1 294.5 cat. and February 2 295.0 cat. and February 3 295.5 cat.
February 4 296.0 cat. and February 5 296.5 cat. and February 6 297.0 cat.
February 7 297.5 cat. and February 8 298.0 cat. and February 9 298.5 cat.
February 10 299.0 cat. and February 11 299.5 cat. and February 12 300.0 cat.
February 13 300.5 cat. and February 14 301.0 cat. and February 15 301.5 cat.
February 16 302.0 cat. and February 17 302.5 cat. and February 18 303.0 cat.
February 19 303.5 cat. and February 20 304.0 cat. and February 21 304.5 cat.
February 22 305.0 cat. and February 23 305.5 cat. and February 24 306.0 cat.
February 25 306.5 cat. and February 26 307.0 cat. and February 27 307.5 cat.
February 28 308.0 cat. and February 29 308.5 cat. and February 30 309.0 cat.
March 1 309.5 cat. and March 2 310.0 cat. and March 3 310.5 cat.
March 4 311.0 cat. and March 5 311.5 cat. and March 6 312.0 cat.
March 7 312.5 cat. and March 8 313.0 cat. and March 9 313.5 cat.
March 10 314.0 cat. and March 11 314.5 cat. and March 12 315.0 cat.
March 13 315.5 cat. and March 14 316.0 cat. and March 15 316.5 cat.
March 16 317.0 cat. and March 17 317.5 cat. and March 18 318.0 cat.
March 19 318.5 cat. and March 20 319.0 cat. and March 21 319.5 cat.
March 22 320.0 cat. and March 23 320.5 cat. and March 24 321.0 cat.
March 25 321.5 cat. and March 26 322.0 cat. and March 27 322.5 cat.
March 28 323.0 cat. and March 29 323.5 cat. and March 30 324.0 cat.
April 1 324.5 cat. and April 2 325.0 cat. and April 3 325.5 cat.
April 4 326.0 cat. and April 5 326.5 cat. and April 6 327.0 cat.
April 7 327.5 cat. and April 8 328.0 cat. and April 9 328.5 cat.
April 10 329.0 cat. and April 11 329.5 cat. and April 12 330.0 cat.
April 13 330.5 cat. and April 14 331.0 cat. and April 15 331.5 cat.
April 16 332.0 cat. and April 17 332.5 cat. and April 18 333.0 cat.
April 19 333.5 cat. and April 20 334.0 cat. and April 21 334.5 cat.
April 22 335.0 cat. and April 23 335.5 cat. and April 24 336.0 cat.
April 25 336.5 cat. and April 26 337.0 cat. and April 27 337.5 cat.
April 28 338.0 cat. and April 29 338.5 cat. and April 30 339.0 cat.
May 1 339.5 cat. and May 2 340.0 cat. and May 3 340.5 cat.
May 4 341.0 cat. and May 5 341.5 cat. and May 6 342.0 cat.
May 7 342.5 cat. and May 8 343.0 cat. and May 9 343.5 cat.
May 10 344.0 cat. and May 11 344.5 cat. and May 12 345.0 cat.
May 13 345.5 cat. and May 14 346.0 cat. and May 15 346.5 cat.
May 16 347.0 cat. and May 17 347.5 cat. and May 18 348.0 cat.
May 19 348.5 cat. and May 20 349.0 cat. and May 21 349.5 cat.
May 22 350.0 cat. and May 23 350.5 cat. and May 24 351.0 cat.
May 25 351.5 cat. and May 26 352.0 cat. and May 27 352.5 cat.
May 28 353.0 cat. and May 29 353.5 cat. and May 30 354.0 cat.
June 1 354.5 cat. and June 2 355.0 cat. and June 3 355.5 cat.
June 4 356.0 cat. and June 5 356.5 cat. and June 6 357.0 cat.
June 7 357.5 cat. and June 8 358.0 cat. and June 9 358.5 cat.
June 10 359.0 cat. and June 11 359.5 cat. and June 12 360.0 cat.
June 13 360.5 cat. and June 14 361.0 cat. and June 15 361.5 cat.
June 16 362.0 cat. and June 17 362.5 cat. and June 18 363.0 cat.
June 19 363.5 cat. and June 20 364.0 cat. and June 21 364.5 cat.
June 22 365.0 cat. and June 23 365.5 cat. and June 24 366.0 cat.
June 25 366.5 cat. and June 26 367.0 cat. and June 27 367.5 cat.
June 28 368.0 cat. and June 29 368.5 cat. and June 30 369.0 cat.
July 1 369.5 cat. and July 2 370.0 cat. and July 3 370.5 cat.
July 4 371.0 cat. and July 5 371.5 cat. and July 6 372.0 cat.
July 7 372.5 cat. and July 8 373.0 cat. and July 9 373.5 cat.
July 10 374.0 cat. and July 11 374.5 cat. and July 12 375.0 cat.
July 13 375.5 cat. and July 14 376.0 cat. and July 15 376.5 cat.
July 16 377.0 cat. and July 17 377.5 cat. and July 18 378.0 cat.
July 19 378.5 cat. and July 20 379.0 cat. and July 21 379.5 cat.
July 22 380.0 cat. and July 23 380.5 cat. and July 24 381.0 cat.
July 25 381.5 cat. and July 26 382.0 cat. and July 27 382.5 cat.
July 28 383.0 cat. and July 29 383.5 cat. and July 30 384.0 cat.
August 1 384.5 cat. and August 2 385.0 cat. and August 3 385.5 cat.
August 4 386.0 cat. and August 5 386.5 cat. and August 6 387.0 cat.
August 7 387.5 cat. and August 8 388.0 cat. and August 9 388.5 cat.
August 10 389.0 cat. and August 11 389.5 cat. and August 12 390.0 cat.
August 13 390.5 cat. and August 14 391.0 cat. and August 15 391.5 cat.
August 16 392.0 cat. and August 17 392.5 cat. and August 18 393.0 cat.
August 19 393.5 cat. and August 20 394.0 cat. and August 21 394.5 cat.
August 22 395.0 cat. and August 23 395.5 cat. and August 24 396.0 cat.
August 25 396.5 cat. and August 26 397.0 cat. and August 27 397.5 cat.
August 28 398.0 cat. and August 29 398.5 cat. and August 30 399.0 cat.
September 1 399.5 cat. and September 2 400.0 cat. and September 3 400.5 cat.
September 4 401.0 cat. and September 5 401.5 cat. and September 6 402.0 cat.
September 7 402.5 cat. and September 8 403.0 cat. and September 9 403.5 cat.
September 10 404.0 cat. and September 11 404.5 cat. and September 12 405.0 cat.
September 13 405.5 cat. and September 14 406.0 cat. and September 15 406.5 cat.
September 16 407.0 cat. and September 17 407.5 cat. and September 18 408.0 cat.
September 19 408.5 cat. and September 20 409.0 cat. and September 21 409.5 cat.
September 22 410.0 cat. and September 23 410.5 cat. and September 24 411.0 cat.
September 25 411.5 cat. and September 26 412.0 cat. and September 27 412.5 cat.
September 28 413.0 cat. and September 29 413.5 cat. and September 30 414.0 cat.
October 1 414.5 cat. and October 2 415.0 cat. and October 3 415.5 cat.
October 4 416.0 cat. and October 5 416.5 cat. and October 6 417.0 cat.
October 7 417.5 cat. and October 8 418.0 cat. and October 9 418.5 cat.
October 10 419.0 cat. and October 11 419.5 cat. and October 12 420.0 cat.
October 13 420.5 cat. and October 14 421.0 cat. and October 15 421.5 cat.
October 16 422.0 cat. and October 17 422.5 cat. and October 18 423.0 cat.
October 19 423.5 cat. and October 20 424.0 cat. and October 21 424.5 cat.
October 22 425.0 cat. and October 23 425.5 cat. and October 24 426.0 cat.
October 25 426.5 cat. and October 26 427.0 cat. and October 27 427.5 cat.
October 28 428.0 cat. and October 29 428.5 cat. and October 30 429.0 cat.
November 1 429.5 cat. and November 2 430.0 cat. and November 3 430.5 cat.
November 4 431.0 cat. and November 5 431.5 cat. and November 6 432.0 cat.
November 7 432.5 cat. and November 8 433.0 cat. and November 9 433.5 cat.
November 10 434.0 cat. and November 11 434.5 cat. and November 12 435.0 cat.
November 13 435.5 cat. and November 14 436.0 cat. and November 15 436.5 cat.
November 16 437.0 cat. and November 17 437.5 cat. and November 18 438.0 cat.
November 19 438.5 cat. and November 20 439.0 cat. and November 21 439.5 cat.
November 22 440.0 cat. and November 23 440.5 cat. and November 24 441.0 cat.
November 25 441.5 cat. and November 26 442.0 cat. and November 27 442.5 cat.
November 28 443.0 cat. and November 29 443.5 cat. and November 30 444.0 cat.
December 1 444.5 cat. and December 2 445.0 cat. and December 3 445.5 cat.
December 4 446.0 cat. and December 5 446.5 cat. and December 6 447.0 cat.
December 7 447.5 cat. and December 8 448.0 cat. and December 9 448.5 cat.
December 10 449.0 cat. and December 11 449.5 cat. and December 12 450.0 cat.
December 13 450.5 cat. and December 14 451.0 cat. and December 15 451.5 cat.
December 16 452.0 cat. and December 17 452.5 cat. and December 18 453.0 cat.
December 19 453.5 cat. and December 20 454.0 cat. and December 21 454.5 cat.
December 22 455.0 cat. and December 23 455.5 cat. and December 24 456.0 cat.
December 25 456.5 cat. and December 26 457.0 cat. and December 27 457.5 cat.
December 28 458.0 cat. and December 29 458.5 cat. and December 30 459.0 cat.
January 1 459.5 cat. and January 2 460.0 cat. and January 3 460.5 cat.
January 4 461.0 cat. and January 5 461.5 cat. and January 6 462.0 cat.
January 7 462.5 cat. and January 8 463.0 cat. and January 9 463.5 cat.
January 10 464.0 cat. and January 11 464.5 cat. and January 12 465.0 cat.
January 13 465.5 cat. and January 14 466.0 cat. and January 15 466.5 cat.
January 16 467.0 cat. and January 17 467.5 cat. and January 18 468.0 cat.
January 19 468.5 cat. and January 20 469.0 cat. and January 21 469.5 cat.
January 22 470.0 cat. and January 23 470.5 cat. and January 24 47

1394

Parasitism on pine from Fisher, Melrose Highlands Mass. July 1908. Adults, eggs and mature larvae. Egg (laid by infertile ♀) spheroidal, base well rounded, micropyle strongly depressed, but smooth and rounded. Opaque white, greenish in the depression. Shell minutely, irregularly shaped. ♂ & ♀ largest, 7 mm. Laid in groups adhering by white frothy gum.

Stage I (Aug 3) Hd. rounded, lobed shiny black. Feet before w. 5 mm. Body robust. Slightly flat and tapering. Sph. tubercles enlarged, protruding. Sordid luteous. The large tubercle black, giving a longitudinal band effect, trace of a pale s.d. line. The lat. line between brownish shaded. C. sh. black with wart. On 2-3. 3 small tubercles about lat. line. On abd. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. On abd. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. On abd. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Two more from Fisher, Aug 17, 1908. Hd. 1. full (sh. hd. 6 mm) rounded quadrate. O rather slight shiny black. Body robust, dusky. Skin sordid luteous, a broad blackish lateral band. Warts large sordid luteous. Short black plumed tuft 5 & 2, single 11 5 & 12, shorter grayer tuft 6 & 7. A few more or less white hair, especially on 3, 4 and 8. Other hairs long, thin, grayish-brown. Red tubercle on 10 & 11 reddish. Feet pale. A pale band along substig. fold. 3 & 4 d. white with narrow black d. line.

Another hd. 6 mm shiny black. Body robust flattened. Warts large esp. 5 & 2. Blackish luteous sordid pale and dusky on 3 & 4. Grayish white. Hair moderate thin dark, a few short plumed ones from 1 especially 5 & 11 on 2 & 12. Warts blackish. The feet black abd. pale.

Food [unclear] Vt 1.2 (Nt 1.0) Same.

Shed Sept 5 - Hd (Shed 1.1) Spin slight web between roots and legs by [unclear] Sept. 10 -

8/10/09

1395

Schizura apicalis ?? on low high [unclear] in an open
 wooded field Lincolnville Maine Aug 15, 1908.
 Head elliptical, much higher than wide, scarcely exceeding
 joint 2 but separated by an [unclear] flattened before
 & less than $\frac{1}{2}$ as high as head. Smooth, [unclear].
 green broadly whitish purple over the face above.
 leaving the [unclear], narrow on [unclear] and side green. The
 purple is mottled with [unclear] [unclear] [unclear]
 and a little patch of purple mottling on the side
 above & behind the [unclear]. W. 2.5 mm. Body [unclear],
 compressed, sloping [unclear] [unclear] 2 to 5 slightly 5
 and 12 slightly humped, then [unclear] 1, forming
 high shiny brown cones, [unclear] [unclear] [unclear].
 all the other tubercles minute except those on 2
 which are perceptible but [unclear] and not
 elevated. Setae rather long black. Anal feet ele-
 vated, [unclear], rather long. Green, mottled
 with whitish [unclear] [unclear] [unclear] pattern
 on the dorsum 6-12. A narrow whitish purple band
 dorsally 2-5. 5 all purple except [unclear] [unclear].
 [unclear]; a white straight lateral stripe along [unclear]
 below which oblique purple shades to the feet [unclear]
 [unclear] of [unclear] [unclear]; a small dorsal purple patch
 on 11 joining 12 which is [unclear] or less completely
 purple shaded to the feet joining the [unclear] purple
 area; the purple [unclear] is a dorsal band [unclear] 12
 the anal feet darker purple. Small purple
 patches at bases of [unclear] feet which are pale.
 The [unclear] is mottled with white and dotted with
 purplish on [unclear] there
 is considerable [unclear]
 purple shading on joint 6.
 The purple is darker around
 the spiracles of 5. There is a faint green [unclear] line
 defined by the white mottling which are also
 and obliquely green [unclear] [unclear] 5 whitish.

1396

Wooded on golden-rod & woods. Lincolnville, Mo. Aug 17 1908. Hd 2.2 shining green held obliquely ventral in 2, antennae rather long divergent whitish. Body rather slender, 2-4 tapering a little, 12 very little enlarged. feet 7-8 small but used. Whitish green, rather strongly white shaded, d & lat line straight narrow white defined by darker edges: subly band white, even edged greenish. Filled broad above narrowly with brown 2-4 and 12. iv 6-7 opposite lower edge of, on 11 below but no very great difference. Tubercles white, i & ii large but more elevated. o white black-ringed. Feet greenish. Shields coriaceous, unmodified.

1397

Phytophag? on *Nikarum lantago*, Lincolnville Mo. Aug. 1908. Not up leaf after spring take from top usually etc more than one together. Feeds of grass loosely webbed, widening and reaching beyond the curled part of leaf. Eat whole leaves later after webbing to stem and cutting midrib. Larva, Hd pale brown, slightly mottled well in 2. On large black, dull. Thorax black. Body striped with various purple separated by narrow irregularly edged with purplish white d. sd. upper, lower lat. and stig. 5 or 6 are present with 2 parallel purple lines. Tubercles minute black. Anal plate greenish not lined.

Dec. 1909. *Glyptocera consobrinella* Zell

Feb 10 1910 for Webster 39

1398

Egg of *Glyptocera consobrinella* from Dr. Webster. Hatched Dec 24, 1908 (described Dec 31) 3rd year. Hd rounded shiny black, 2 setae rather coarse, whitish. Body subcylindrical even from dark brown unmarked. Spine black, equal with single long whitish setae. On abd. i on a spine; ii from skin. iii on a spine, iv + v on a spine. Leg plates with 2 small setae. On 12 a single forked d. spine for i, ii from skin. On 13 a single forked spine post, single d and single lat, none from skin. Anal plate bare black but with setae, anal post plate

VI

Assured profile with elongate white patches on (1) face
dividing into 4 stages a sd wavy purple line. Dorsal
pale yellow with central vermillion line, the horns
vermillion tinted, Horns 5 brown-red. Lat. space
with pale patch over (4) space pale yellow below.
Leaving purple line above narrow & central slightly
red. A livid purple wavy line each side of ridge
the horns orange tinted. 3-4 solidly purple shaded
in interspace. Superficial granular dots in (1) space
skin rather densely granular shagreened.

Stage 6 8.5 by 10
" 27 11.0 lat
" 28 12 "
" 29 13 " lat
" 30 " "
lat 1 " "
" 2 " "

Stage 7 10.5 by 12
" 40 16 lat
" 5 17 " "

Shed Stage 26 Elongate elliptical, dorsum
gently inclined, rudimentarily broad sides
elliptical, 2x retract. Horns ① ③ and ④ ⑤
dorsal curved rather long and dark
vermilion ① 2-12 & ③ 4, 6-12 banded red-
yellow vermillion in a slender vermillion
ridge. Surface pale yellow
yellowish. A lat. space with 3 purple
horns thin, central stage, side line narrow, 2 slender
line & 5-6 space. Horns well defined (1) & (4) rounded
dot darkish. Skin granular shagreened. Chin face
" lat. of all lat horns with a few callosities. The
horns above the horns ① ③ & ⑤ ⑥ largest & without callosities
Shed Sept 3 Same. and horn patches black above the long
① ③ and short ④ ⑥. Callosities at base of ② 6-11
3 purple stained, its long horns tapered into purple.
① ② ridge vermillion tinted the rounded tubercle
black above. Dorsum pale pink, the horn 3
nearly black, a slight sd wavy (1) space dark
with raised granular edge. A yellowish line to
① ridge. Side less pinkish, its central line broken
and wavy, rather purplish than black, the upper &
lower horns black, upper well raised, lower less so.
S-V carmine, with 2 blackish line, the S-V edge
reddish. Long horns ① ③ purple, the S-V edge
pale & slightly. Skin rather densely clear granular
Spines on horns white with black tips.

VII

1450

Hymenoptera, Hymenoptera, Hymenoptera H. 9. Hymenoptera
for Chittenden, from a black fly larva. Hymenoptera
egg. The body elliptical, strongly flattened on
the sides and lower sides, smooth, granular
granular, white (in alcohol). 6x4x2.5 mm
Lat. width 1.5 mm. Lat. width 1.5 mm.
Stage 1 1.5 mm. Lat. width 1.5 mm.
Stage 2 2.5 mm. Lat. width 2.5 mm.
Stage 3 3.5 mm. Lat. width 3.5 mm.
Stage 4 4.5 mm. Lat. width 4.5 mm.
Stage 5 5.5 mm. Lat. width 5.5 mm.
Stage 6 6.5 mm. Lat. width 6.5 mm.
Stage 7 7.5 mm. Lat. width 7.5 mm.
Stage 8 8.5 mm. Lat. width 8.5 mm.
Stage 9 9.5 mm. Lat. width 9.5 mm.
Stage 10 10.5 mm. Lat. width 10.5 mm.
Stage 11 11.5 mm. Lat. width 11.5 mm.
Stage 12 12.5 mm. Lat. width 12.5 mm.
Stage 13 13.5 mm. Lat. width 13.5 mm.
Stage 14 14.5 mm. Lat. width 14.5 mm.
Stage 15 15.5 mm. Lat. width 15.5 mm.
Stage 16 16.5 mm. Lat. width 16.5 mm.
Stage 17 17.5 mm. Lat. width 17.5 mm.
Stage 18 18.5 mm. Lat. width 18.5 mm.
Stage 19 19.5 mm. Lat. width 19.5 mm.
Stage 20 20.5 mm. Lat. width 20.5 mm.
Stage 21 21.5 mm. Lat. width 21.5 mm.
Stage 22 22.5 mm. Lat. width 22.5 mm.
Stage 23 23.5 mm. Lat. width 23.5 mm.
Stage 24 24.5 mm. Lat. width 24.5 mm.
Stage 25 25.5 mm. Lat. width 25.5 mm.
Stage 26 26.5 mm. Lat. width 26.5 mm.
Stage 27 27.5 mm. Lat. width 27.5 mm.
Stage 28 28.5 mm. Lat. width 28.5 mm.
Stage 29 29.5 mm. Lat. width 29.5 mm.
Stage 30 30.5 mm. Lat. width 30.5 mm.
Stage 31 31.5 mm. Lat. width 31.5 mm.
Stage 32 32.5 mm. Lat. width 32.5 mm.
Stage 33 33.5 mm. Lat. width 33.5 mm.
Stage 34 34.5 mm. Lat. width 34.5 mm.
Stage 35 35.5 mm. Lat. width 35.5 mm.
Stage 36 36.5 mm. Lat. width 36.5 mm.
Stage 37 37.5 mm. Lat. width 37.5 mm.
Stage 38 38.5 mm. Lat. width 38.5 mm.
Stage 39 39.5 mm. Lat. width 39.5 mm.
Stage 40 40.5 mm. Lat. width 40.5 mm.
Stage 41 41.5 mm. Lat. width 41.5 mm.
Stage 42 42.5 mm. Lat. width 42.5 mm.
Stage 43 43.5 mm. Lat. width 43.5 mm.
Stage 44 44.5 mm. Lat. width 44.5 mm.
Stage 45 45.5 mm. Lat. width 45.5 mm.
Stage 46 46.5 mm. Lat. width 46.5 mm.
Stage 47 47.5 mm. Lat. width 47.5 mm.
Stage 48 48.5 mm. Lat. width 48.5 mm.
Stage 49 49.5 mm. Lat. width 49.5 mm.
Stage 50 50.5 mm. Lat. width 50.5 mm.
Stage 51 51.5 mm. Lat. width 51.5 mm.
Stage 52 52.5 mm. Lat. width 52.5 mm.
Stage 53 53.5 mm. Lat. width 53.5 mm.
Stage 54 54.5 mm. Lat. width 54.5 mm.
Stage 55 55.5 mm. Lat. width 55.5 mm.
Stage 56 56.5 mm. Lat. width 56.5 mm.
Stage 57 57.5 mm. Lat. width 57.5 mm.
Stage 58 58.5 mm. Lat. width 58.5 mm.
Stage 59 59.5 mm. Lat. width 59.5 mm.
Stage 60 60.5 mm. Lat. width 60.5 mm.
Stage 61 61.5 mm. Lat. width 61.5 mm.
Stage 62 62.5 mm. Lat. width 62.5 mm.
Stage 63 63.5 mm. Lat. width 63.5 mm.
Stage 64 64.5 mm. Lat. width 64.5 mm.
Stage 65 65.5 mm. Lat. width 65.5 mm.
Stage 66 66.5 mm. Lat. width 66.5 mm.
Stage 67 67.5 mm. Lat. width 67.5 mm.
Stage 68 68.5 mm. Lat. width 68.5 mm.
Stage 69 69.5 mm. Lat. width 69.5 mm.
Stage 70 70.5 mm. Lat. width 70.5 mm.
Stage 71 71.5 mm. Lat. width 71.5 mm.
Stage 72 72.5 mm. Lat. width 72.5 mm.
Stage 73 73.5 mm. Lat. width 73.5 mm.
Stage 74 74.5 mm. Lat. width 74.5 mm.
Stage 75 75.5 mm. Lat. width 75.5 mm.
Stage 76 76.5 mm. Lat. width 76.5 mm.
Stage 77 77.5 mm. Lat. width 77.5 mm.
Stage 78 78.5 mm. Lat. width 78.5 mm.
Stage 79 79.5 mm. Lat. width 79.5 mm.
Stage 80 80.5 mm. Lat. width 80.5 mm.
Stage 81 81.5 mm. Lat. width 81.5 mm.
Stage 82 82.5 mm. Lat. width 82.5 mm.
Stage 83 83.5 mm. Lat. width 83.5 mm.
Stage 84 84.5 mm. Lat. width 84.5 mm.
Stage 85 85.5 mm. Lat. width 85.5 mm.
Stage 86 86.5 mm. Lat. width 86.5 mm.
Stage 87 87.5 mm. Lat. width 87.5 mm.
Stage 88 88.5 mm. Lat. width 88.5 mm.
Stage 89 89.5 mm. Lat. width 89.5 mm.
Stage 90 90.5 mm. Lat. width 90.5 mm.
Stage 91 91.5 mm. Lat. width 91.5 mm.
Stage 92 92.5 mm. Lat. width 92.5 mm.
Stage 93 93.5 mm. Lat. width 93.5 mm.
Stage 94 94.5 mm. Lat. width 94.5 mm.
Stage 95 95.5 mm. Lat. width 95.5 mm.
Stage 96 96.5 mm. Lat. width 96.5 mm.
Stage 97 97.5 mm. Lat. width 97.5 mm.
Stage 98 98.5 mm. Lat. width 98.5 mm.
Stage 99 99.5 mm. Lat. width 99.5 mm.
Stage 100 100.5 mm. Lat. width 100.5 mm.

(The 6-8 1.0 1.2; no certainty in the stage. The
black spots 3-4 3-4 on the tubercles.
The 1st stage is 1.5 mm. Lat. width 1.5 mm.
The 2nd stage is 2.5 mm. Lat. width 2.5 mm.
The 3rd stage is 3.5 mm. Lat. width 3.5 mm.
The 4th stage is 4.5 mm. Lat. width 4.5 mm.
The 5th stage is 5.5 mm. Lat. width 5.5 mm.
The 6th stage is 6.5 mm. Lat. width 6.5 mm.
The 7th stage is 7.5 mm. Lat. width 7.5 mm.
The 8th stage is 8.5 mm. Lat. width 8.5 mm.
The 9th stage is 9.5 mm. Lat. width 9.5 mm.
The 10th stage is 10.5 mm. Lat. width 10.5 mm.
The 11th stage is 11.5 mm. Lat. width 11.5 mm.
The 12th stage is 12.5 mm. Lat. width 12.5 mm.
The 13th stage is 13.5 mm. Lat. width 13.5 mm.
The 14th stage is 14.5 mm. Lat. width 14.5 mm.
The 15th stage is 15.5 mm. Lat. width 15.5 mm.
The 16th stage is 16.5 mm. Lat. width 16.5 mm.
The 17th stage is 17.5 mm. Lat. width 17.5 mm.
The 18th stage is 18.5 mm. Lat. width 18.5 mm.
The 19th stage is 19.5 mm. Lat. width 19.5 mm.
The 20th stage is 20.5 mm. Lat. width 20.5 mm.
The 21st stage is 21.5 mm. Lat. width 21.5 mm.
The 22nd stage is 22.5 mm. Lat. width 22.5 mm.
The 23rd stage is 23.5 mm. Lat. width 23.5 mm.
The 24th stage is 24.5 mm. Lat. width 24.5 mm.
The 25th stage is 25.5 mm. Lat. width 25.5 mm.
The 26th stage is 26.5 mm. Lat. width 26.5 mm.
The 27th stage is 27.5 mm. Lat. width 27.5 mm.
The 28th stage is 28.5 mm. Lat. width 28.5 mm.
The 29th stage is 29.5 mm. Lat. width 29.5 mm.
The 30th stage is 30.5 mm. Lat. width 30.5 mm.
The 31st stage is 31.5 mm. Lat. width 31.5 mm.
The 32nd stage is 32.5 mm. Lat. width 32.5 mm.
The 33rd stage is 33.5 mm. Lat. width 33.5 mm.
The 34th stage is 34.5 mm. Lat. width 34.5 mm.
The 35th stage is 35.5 mm. Lat. width 35.5 mm.
The 36th stage is 36.5 mm. Lat. width 36.5 mm.
The 37th stage is 37.5 mm. Lat. width 37.5 mm.
The 38th stage is 38.5 mm. Lat. width 38.5 mm.
The 39th stage is 39.5 mm. Lat. width 39.5 mm.
The 40th stage is 40.5 mm. Lat. width 40.5 mm.
The 41st stage is 41.5 mm. Lat. width 41.5 mm.
The 42nd stage is 42.5 mm. Lat. width 42.5 mm.
The 43rd stage is 43.5 mm. Lat. width 43.5 mm.
The 44th stage is 44.5 mm. Lat. width 44.5 mm.
The 45th stage is 45.5 mm. Lat. width 45.5 mm.
The 46th stage is 46.5 mm. Lat. width 46.5 mm.
The 47th stage is 47.5 mm. Lat. width 47.5 mm.
The 48th stage is 48.5 mm. Lat. width 48.5 mm.
The 49th stage is 49.5 mm. Lat. width 49.5 mm.
The 50th stage is 50.5 mm. Lat. width 50.5 mm.
The 51st stage is 51.5 mm. Lat. width 51.5 mm.
The 52nd stage is 52.5 mm. Lat. width 52.5 mm.
The 53rd stage is 53.5 mm. Lat. width 53.5 mm.
The 54th stage is 54.5 mm. Lat. width 54.5 mm.
The 55th stage is 55.5 mm. Lat. width 55.5 mm.
The 56th stage is 56.5 mm. Lat. width 56.5 mm.
The 57th stage is 57.5 mm. Lat. width 57.5 mm.
The 58th stage is 58.5 mm. Lat. width 58.5 mm.
The 59th stage is 59.5 mm. Lat. width 59.5 mm.
The 60th stage is 60.5 mm. Lat. width 60.5 mm.
The 61st stage is 61.5 mm. Lat. width 61.5 mm.
The 62nd stage is 62.5 mm. Lat. width 62.5 mm.
The 63rd stage is 63.5 mm. Lat. width 63.5 mm.
The 64th stage is 64.5 mm. Lat. width 64.5 mm.
The 65th stage is 65.5 mm. Lat. width 65.5 mm.
The 66th stage is 66.5 mm. Lat. width 66.5 mm.
The 67th stage is 67.5 mm. Lat. width 67.5 mm.
The 68th stage is 68.5 mm. Lat. width 68.5 mm.
The 69th stage is 69.5 mm. Lat. width 69.5 mm.
The 70th stage is 70.5 mm. Lat. width 70.5 mm.
The 71st stage is 71.5 mm. Lat. width 71.5 mm.
The 72nd stage is 72.5 mm. Lat. width 72.5 mm.
The 73rd stage is 73.5 mm. Lat. width 73.5 mm.
The 74th stage is 74.5 mm. Lat. width 74.5 mm.
The 75th stage is 75.5 mm. Lat. width 75.5 mm.
The 76th stage is 76.5 mm. Lat. width 76.5 mm.
The 77th stage is 77.5 mm. Lat. width 77.5 mm.
The 78th stage is 78.5 mm. Lat. width 78.5 mm.
The 79th stage is 79.5 mm. Lat. width 79.5 mm.
The 80th stage is 80.5 mm. Lat. width 80.5 mm.
The 81st stage is 81.5 mm. Lat. width 81.5 mm.
The 82nd stage is 82.5 mm. Lat. width 82.5 mm.
The 83rd stage is 83.5 mm. Lat. width 83.5 mm.
The 84th stage is 84.5 mm. Lat. width 84.5 mm.
The 85th stage is 85.5 mm. Lat. width 85.5 mm.
The 86th stage is 86.5 mm. Lat. width 86.5 mm.
The 87th stage is 87.5 mm. Lat. width 87.5 mm.
The 88th stage is 88.5 mm. Lat. width 88.5 mm.
The 89th stage is 89.5 mm. Lat. width 89.5 mm.
The 90th stage is 90.5 mm. Lat. width 90.5 mm.
The 91st stage is 91.5 mm. Lat. width 91.5 mm.
The 92nd stage is 92.5 mm. Lat. width 92.5 mm.
The 93rd stage is 93.5 mm. Lat. width 93.5 mm.
The 94th stage is 94.5 mm. Lat. width 94.5 mm.
The 95th stage is 95.5 mm. Lat. width 95.5 mm.
The 96th stage is 96.5 mm. Lat. width 96.5 mm.
The 97th stage is 97.5 mm. Lat. width 97.5 mm.
The 98th stage is 98.5 mm. Lat. width 98.5 mm.
The 99th stage is 99.5 mm. Lat. width 99.5 mm.
The 100th stage is 100.5 mm. Lat. width 100.5 mm.

found a case of very slender larvae, but quite
with hooked tips. 10 x 3 mm. Surface smooth
very distinct sculpture.

1401

Yerpe on wild morning glory, Chan Bridge
road, D.C., Aug. 14, 1917 (with Linsley)
Joints 4-5 swollen. Hd rounded quadrate,
shallowly bilobed, a large dark brown
with 2 irregular edged white lines running
up on each lobe & a point on vertex.
Hd held flat as the line runs in the
direction of body. Body cylindrical swollen
4-5 10-12 contracted, feet normal, smooth
faintly annulated. Dark brown the sides
marked with white oblique lines. The
marking starts on 6, as a triple strip row
of white dots on a reddish ground, consoli-
dated into 2 oblique white marks on the
ant. halves of 6-9, the lower streak in the
laid, the upper running from before the
spiracle to ant. edge of segment sublaterally.
A dorsal and sd band of pale white dots
running whole length of larva, 2-5 also
dotted laterally and a little marked
in dark brown & flesh-color on the middle
part laterally. Venter with a narrow white
line the whole length and several rows of
white dots between to and lateral band.
A pale stigmatal area 10-13 running out-
post of 10 and forming a white line on post
of 13. The feet dark brown, dotted with white.
Spun Aug. 16 a large loose web, almost invisible
in the midst of which lies the 5 as if hanging in
the air between the leaves.
Out Aug. 21, 1917 Exochus amatus Gask.

1402

Larvae on a weed and box elder, Phummers
Ed, Md. by H. S. Barber, Aug. 17, 1917.

Hd rounded bilobed, small, violaceous brown,
dark on vertex, ~~dark~~ black. Body cylindrical,
thick, a little enlarged & enlarged bases of
ii and iii on 6, 12 angled & enlarged i bases.
Thorax small, bare at an angle at 4. Dark
brown (forming flanges laterally 5-7) marked
with lilacine on 5-9 dorsally pale oblique
bands which form ellipses anteriorly. On
8-9 laterally a light yellow oblique mark
small & angled on 8, a patch on 9, running
in a line to base of foot on 10. All other
marks shaded & mottled, then distinct.

1403

Noctuid on ~~goldenrod~~^{aster} flowers, Glen-
carlyn, Va. by H. S. Barber, Oct. 3, 1922.

Hd rounded, vertex under 2, pale green on
the sides with diffuse black bars, face
black, a broad pale green line clippers,
epistoma pale green. Antennae pale.
Skin dull, wrinkled (moagreened). A
broad light orange-red dorsal band,
constricted on 2, and on hump on 12.
S-d black running down broadly to 11 and
narrowly ant. & prob. on scap. between
pale pea-green. A broad bright orange red
substyg. line, slightly wavy on scap.
without border, but black on tubercles
and bars in increases ant. & prob. Venter
& feet pale pea-green. The pale green runs
up to dorsal red line on 2 (ant & prob) 12,
13 and 14. Tubercles invisible. spiracles

Cucullia affarata Stuck

Co

De

"

"

"

Jan

"

"

Mar

"

"

Jun

"

"

S

"

"

86

"

"

S

"

"

S

"

"

S

"

"

S

"

"

679⁵/₈

